ICE and REFRIGERATION

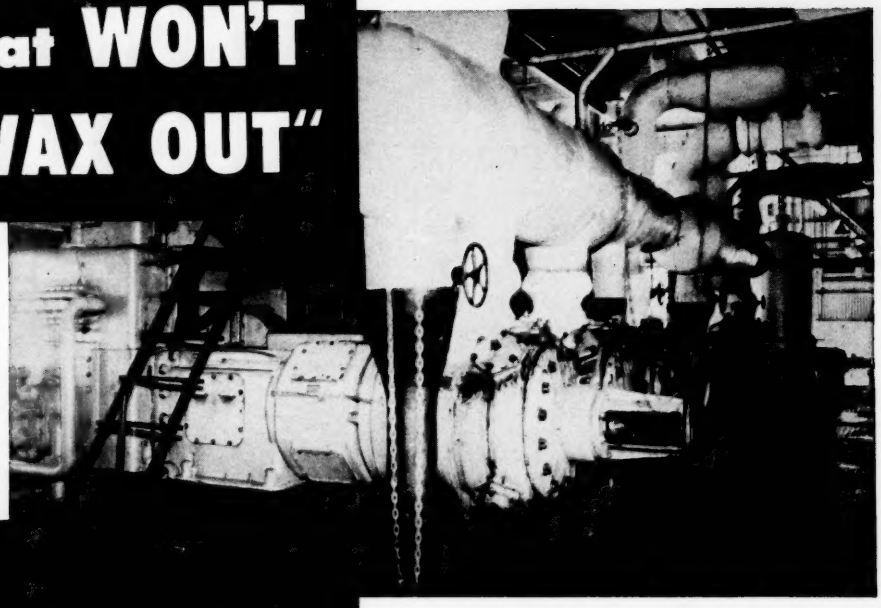
THE NATIONAL
INDUSTRIAL

National Ice Association Holds Annual Convention . . . page 19

DECEMBER • 1952

43rd Annual Convention NAPRE Meets in Dallas . . . . page 37

Use the oil that WON'T "WAX OUT"



TEXACO CAPELLA OIL (WAXFREE)

Even down to minus 100° F. *Texaco Capella Oil (Waxfree)* won't "wax out" in your compressor systems. This means that whatever your refrigerating range, whatever your refrigerant — you'll get clean, efficient operation.

Tests show that *Texaco Capella Oil (Waxfree)* has outstandingly low haze and floc temperatures. Service under actual operating conditions demonstrates its stability and resistance to oxidation. *Texaco Capella Oil (Waxfree)* does not foam, is moisture-free, and does not react with refrigerants.

You get the new and improved *Texaco Capella Oils (Waxfree)* in the exact viscosity you need for best results. There is a complete line available in *refinery-sealed* 55-gallon drums, 5-gallon, 1-gallon and 1-quart containers.

Let a Texaco Lubrication Engineer help you select the right oil for your compressors. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York 17, N. Y.

TEXACO Capella Oils (Waxfree)

FOR ALL REFRIGERATING AND AIR CONDITIONING COMPRESSORS

Faithfully yours 50 *for Fifty Years*

TUNE IN . . . TEXACO STAR THEATER starring **MILTON BERLE**, on television Tuesday nights. **METROPOLITAN OPERA** radio broadcasts Saturday afternoons.

ICE AND REFRIGERATION, Vol. 123, No. 6. Published monthly at 433 N. Waller Ave., Chicago, Ill., U.S.A., by Nickerson & Collins Co. Yearly subscription in the U. S., $3.00 per year; other countries, $4.00. Single copies, 35 cents.

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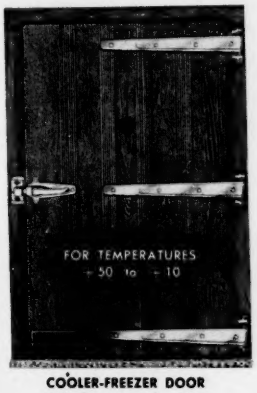
"Butcher Boy"

REFRIGERATOR DOOR CO.

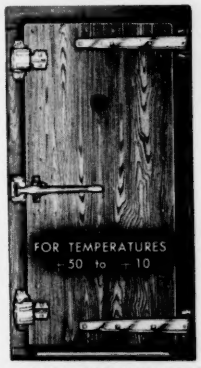
STRONGEST
MOST DURABLE
ONLY 100% MODERN

REFRIGERATOR DOORS
BUILT IN THE WORLD

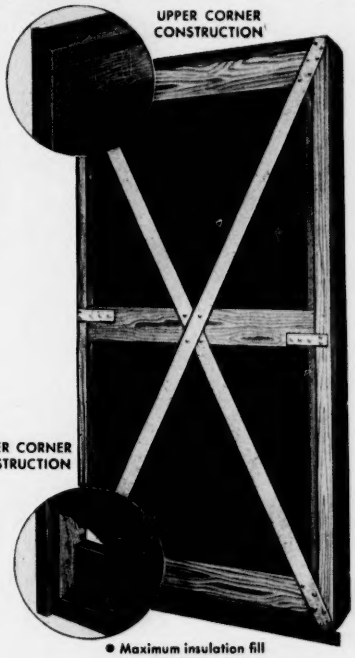
NEW "X-TYPE" DOORS
FEATURING "X-TYPE" STEEL DIAGONAL BRACING



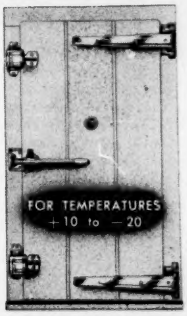
COOLER-FREEZER DOOR
- Modern streamlined job
- 100% "Douglas Fir"
- Sanitary hardware



X-52 PLYWOOD PANEL DOOR
- Plywood front and back
- Extra heavy-duty hardware
- Special type gaskets

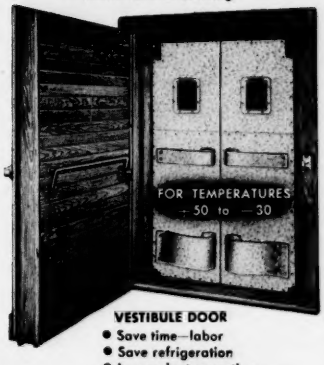


- Maximum insulation fill
- Most possible rigidity
- Allows reversal of swing



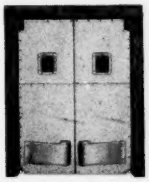
LOW TEMPERATURE DOOR
- Entire metal-clad front
- Extra heavy-duty hardware
- Special type gaskets

SUPER FREEZER (OVER-LAP) DOOR
- Extra-heavy construction
- Extra-heavy duty gaskets
- Extra heavy-duty hardware

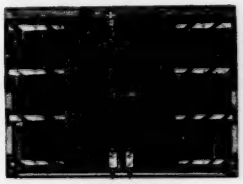


VESTIBULE DOOR
- Save time—labor
- Save refrigeration
- Large plant operation

TRACK DOOR
- For abattoirs
- Meat handling rails
- Banana rooms



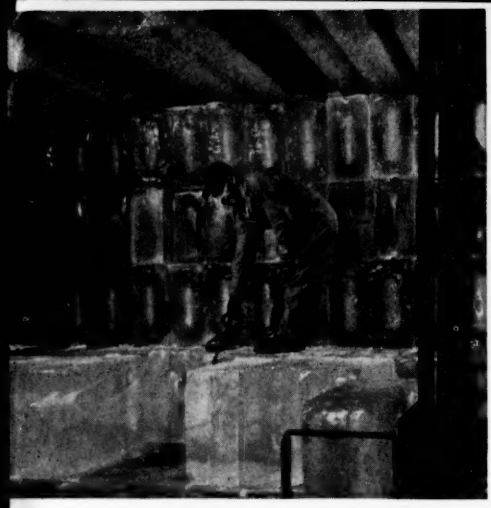
AUTO-CLOSE DOOR
- For loading dock
- Intra-cooler doors
- Heavy trucking



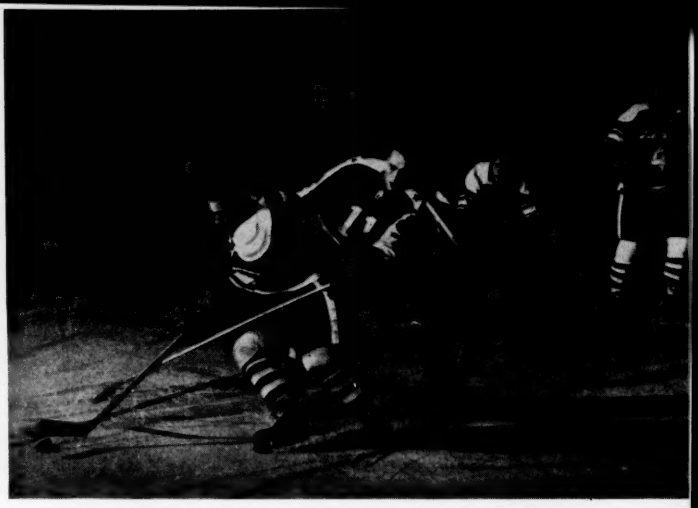
DOUBLE DOOR
- For palletizing
- For carloading
- For elevator shafts

When a Man Thinks Twice ...He Makes Comparisons!

BUTCHER BOY REFRIGERATOR DOOR CO. • HARVARD, ILL.



450 TONS OF ICE can be safely stored in this room. All of it is needed for concessions at Hershey Park and for domestic consumption. The supply is always dependable, thanks to Suniso.



THE HERSHEY BEARS AVERT A SCORE. The ice for this sports arena has been supplied with the help of a Suniso Refrigeration Oil for about six years. With a previous oil, compressor breakdowns were a constant threat to the sports program.

COMPRESSOR EFFICIENCY BOOSTED 15% BY SUNISO

The refrigeration compressors which service the Hershey Sports Arena, home of the Hershey Bears, are part of a central system which also takes care of an ice plant, frozen food lockers and cold storage rooms. About six years ago, the compressors were losing efficiency because of an inadequate refrigeration oil. It formed excessive lacquer and carbon deposits, which clogged the lines and made frequent overhauls necessary.

To solve the problem, management called in a Sun representative, and on his advice switched to a Suniso Refrigeration Oil. Suniso's natural detergency immediately began attacking the deposits throughout the system, carrying the sludge to traps and filters. Soon the system was entirely clean. Since then—over six years ago—the compressors have run at an overall added efficiency of 15 percent, and have always been equal to the heavy requirements made of them.

TEMPERATURES FROM −50F to +50F are supplied by these Frick ammonia compressors. They circulate brine through coils in the ice plant and under the arena floor, and ammonia through coils in the cooling and quick-freezing rooms. One grade of Suniso lubricates all of these compressors. Overall efficiency has been 15 percent better ever since its adoption.

75 TONS OF PEACHES AND APPLES are stored at 31F to 35F. Nearby are cold rooms protecting potatoes, cheese and raisins at 38F to 40F, powdered milk for chocolate at 40F; a quick-freeze held at −40F to −50F; frozen food storage at −6F to −8F. These rooms are all serviced by the same central system which handles the arena and ice plant.

SUN OIL COMPANY, Dept. IR-12, Philadelphia 3, Pa.

If faulty lubrication is possibly costing you compressor efficiency, use this coupon to get: ☐ the services of a Sun representative, ☐ a free copy of the technical bulletin "Lubrication of Refrigeration and Air Conditioning Equipment."

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Title_____

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ICE and Refrigeration

VOLUME 123 NUMBER 6

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December, 1952

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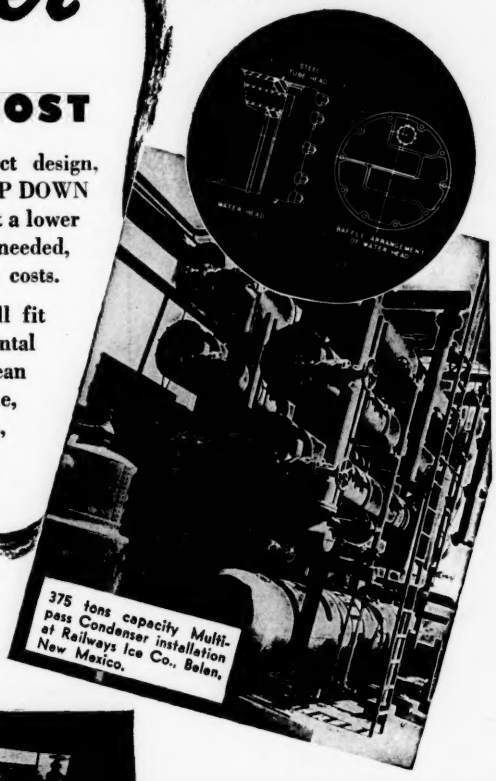
$ave Power and REFRIGERATION COST

Vogt Condensers, because of their correct design, STEP UP the rate of heat transfer and STEP DOWN head pressures. With the liquid delivered at a lower temperature, smaller compressor capacity is needed, saving in original as well as operating costs.

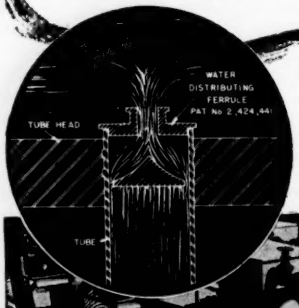
One of the two basic types illustrated will fit your operations exactly. Install Horizontal Multipass (closed type) for use with clean waters. Where the water is hard, forms scale, contains mud or promotes fungus growth, Vertical Single Pass (film type) which can be cleaned in operation, are recommended.

Horizontal Multipass Condensers
(Closed Type)

Water circulated in tubes traverses the length of the unit a number of times as determined by baffles in the heads.



375 tons capacity Multipass Condenser installation at Railways Ice Co., Belen, New Mexico.



Vertical Single Pass Condensers
(Film Type)

Patented ferrules give equal distribution of water to and over the surfaces of all tubes in a unit.

Battery of eight 42"x 16'-0" Vertical, Single Pass, Condensers at Armour and Company, National Stockyards, Illinois.

HORIZONTAL and VERTICAL TYPES SHELL and TUBE CONDENSERS For Every Service

Write For Bulletin RC-1

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Vogt REFRIGERATION CONDENSERS

IMPARTIAL RESEARCH PROVES PERMANENCE OF ALUMISEAL INSULATION

Heat Flow 3 to 5% Less Than Initial Published Values— In Operation Since 1948

EDWARD SIMONS
CONSULTING ENGINEER
995 MARKET STREET
SAN FRANCISCO 3, CALIFORNIA
GARFIELD 1-3537

September 10, 1952
Ref: #4058

C. T. Hogan & Company, Inc.,
383 Madison Avenue,
New York 17, New York

Re: 0°F. Alumiseal Insulation
Standard Brands, Inc., 601 E. Erie Ave., Philadelphia, Pa.

Gentlemen:-

Heat flow tests were made August 31 and September 1, 1952, a period in which the activity of the plant and warehouse was at a minimum, thus allowing excellent test conditions. Heat flow was measured with Gier & Dunkle heat meters. Meter outputs in millivolts and thermocouple responses were measured by a specially equipped Brown portable pyrometer balancing through a custom-built electronic galvanometer which has been developed for this work.

The temperature of the meter and outer Alumiseal sheet on the ceiling averaged 71 deg. F., and the temperature of the opposite interior Alumiseal sheet averaged 6 deg. F. In the wall tests, the exterior meter temperature was 73 deg. F. and the interior Alumiseal sheet temperature was 7 deg. F. During September 1, 1952, the day on which the test readings were made, there was heavy rain and high humidity. At no time during the test did any condensation appear on the exterior Alumiseal sheets.

The results of the actual test measurements of heat flow across the reflective spaces together with various components of complementary heat transfer analysis with respect to panel structure indicate clearly and definitely that the conductances of the Alumiseal insulation as installed are less than those indicated by the standard curves of C. T. Hogan & Company, Inc., dated June 16, 1948, and titled FIGURE "A". **Horizontal heat flow through the vertical walls was 5% less than the curves indicate; and heat flow downward through the ceiling was 3% less than the curves indicate.** I therefore make the definite statement that the data as presented by you are absolutely reliable for use with Alumiseal constructed with the technique and structural design of C. T. Hogan & Company, Inc.

I have had considerable experience in the testing of walls of reflective type insulation. The experience and techniques which I have developed in such tests were applied to the installation in question. There is no question but that this is an excellent installation, well designed, well constructed, and with an exterior vapor barrier adequately balanced against the interior Alumiseal liner.

Very truly yours,

Edward Simons

Edward Simons

ES/bs

ALUMISEAL CORPORATION
383 MADISON AVENUE, NEW YORK 17, NEW YORK

Engineering, design and installation by **C. T. HOGAN & COMPANY**
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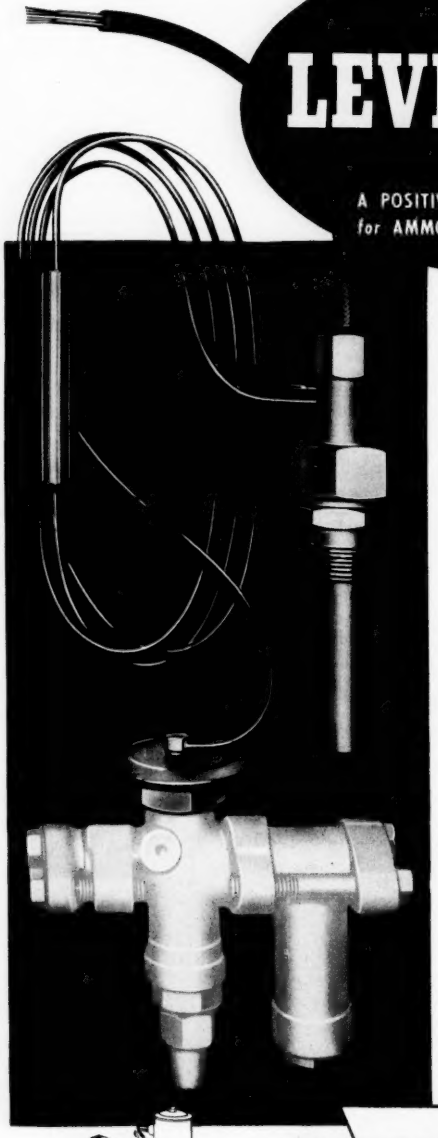
Sporlan LEVEL-MASTER control

A POSITIVE LIQUID LEVEL CONTROL *for* AMMONIA, F-12 *and* F-22 *with* . . .



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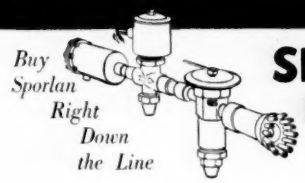
5. **Tight Closing.** Tight closing is assured during the off cycle when the heater element is off and liquid is in contact with insert bulb.
6. **No Current Flow Through Refrigerant.**
7. **Employs Proven Thermostatic Expansion Value Performance.** Not an electronic device.

The Level-Master Control is a standard Sporlan Thermostatic Expansion Valve equipped with the New Level-Master Element. The Level-Master Element consists of a conventional thermostatic power element, and a low wattage heater. The heater provides an artificial superheat to the thermostatic charge. As the liquid level drops, the heater temperature increases the pressure in the thermostatic element thereby opening the expansion valve. When the liquid level rises and makes contact with the bulb, the refrigerating effect overcomes the heater and the valve throttles.

Write Today **For Copy of Bulletin 60-15 and see why You should use a Sporlan Level-Master Control for YOUR flooded refrigeration systems.**



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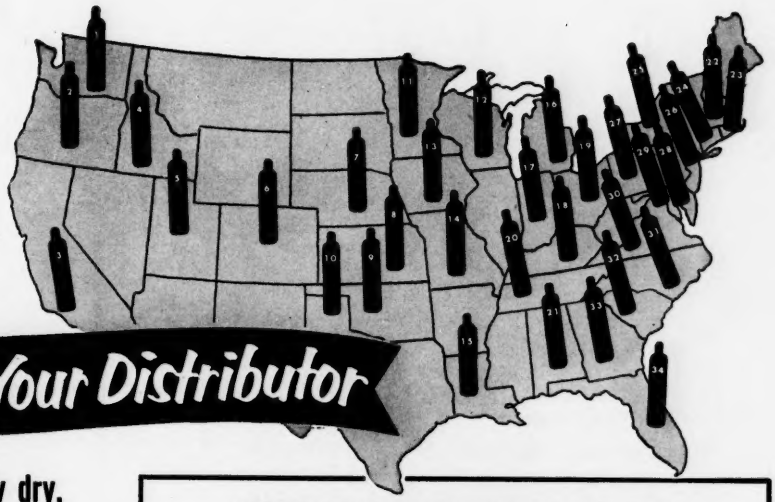

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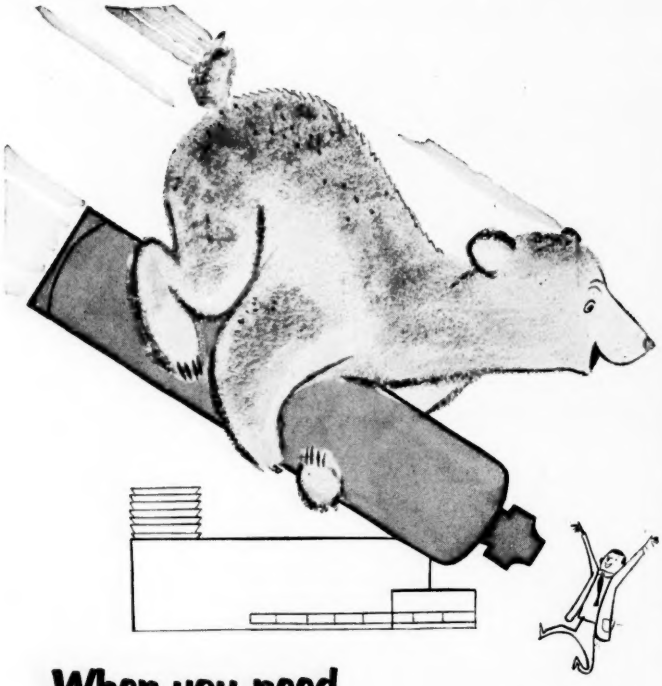

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- It is available in quantities you need—50-, 100- and 150-lb. cylinders.

Armour strives to provide its customers with the most dependable, safest and speediest ammonia service. And Armour ammonia has all the advantages you require—freedom from non-condensable gases and oils, for instance—as well as fast delivery. Also at your disposal is the know-how of the men of our Technical Service Department. If you need a source of ammonia that can provide this kind of service, call the Armour office nearest you—they're listed at right for your convenience.

You can depend on Armour's Ammonia and Service

ARMOUR *Ammonia Division*

Armour and Company • 1335 W. 31st Street, Chicago 9, Illinois

Wherever you are, there's an Armour office within reach of your telephone. So call and get acquainted with your Armour ammonia salesman today!

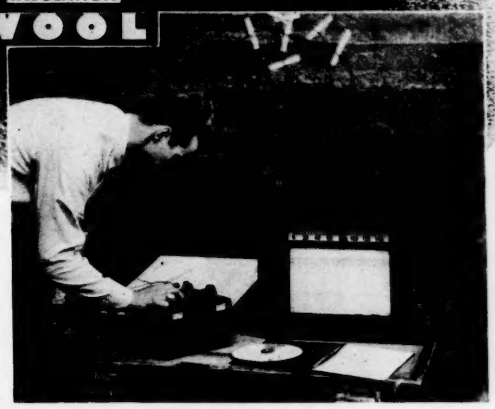
Birmingham, Ala.....37225
Little Rock, Ark.....9135
Los Angeles, Cal.....Michigan 8181
Oakland, Cal.....HI 4-7420
Sacramento, Cal.....GI 3-7424
San Francisco, Cal.....GA 1-8650
South San Francisco, Cal...JUno 8-7714
Denver, Colo.....Tabor 8121
New Haven, Conn.....8-1141-5
Waterbury, Conn.....3-3181-2-3-4-5
Washington, D. C...MEtropolitan 5366
Jacksonville, Fla.....4-6841
Miami, Fla.....3-4736
Tampa, Fla.....2-2621
Atlanta, Ga.....Elgin 0331
Columbus, Ga.....2-2367
Savannah, Ga.....3-4517-8-9
Chicago, Ill.....LAfayette 3-7000
National Stock Yards....Bridge 1220
Sioux City, Ia.....8-7511
Kansas City, Kan.....Garfield 4250
Louisville, Ky.....Jackson 4321
New Orleans, La.....Raymond 3301
Shreveport, La.....34237
Baltimore, Md.....Saratoga 1900
Boston, Mass.....GA 7-8110
Worcester, Mass....2-5633-4-5-6-7-8
Detroit, Mich.....Woodward 1-3502
Minneapolis, Minn.....AT-4501-8
South St. Paul, Minn.....LaSalle 6481
St. Paul, Minn.....GA 4351-6
South St. Joseph, Mo.....8-0661
St. Louis, Mo.....Main 3600
South Omaha, Neb.....Market 5400
North Bergen, N. J.....Union 7-1776
Passaic, N. J.....Prescott 7-0300
Paterson, N. J.....
Sherwood 2-8040-1-2-3-4
Brooklyn, N. Y.....EV 7-3900
Buffalo, N. Y.....MA 1413
New York City, N. Y..Longacre 4-5955
Rochester, N. Y.....Locust 3570
Syracuse, N. Y.....76-5391
Yonkers, N. Y.....Y-5-4422-3-4
Charlotte, N. C.....3-5152-3-4
Cleveland, Ohio.....Endicott 1-1160
Columbus, Ohio.....Garfield 2161
Toledo, Ohio.....Adams 9131
Oklahoma City, Okla.....79-2551
Tulsa, Okla.....37151-2-3
Portland, Ore.....Twinoaks 1151
Philadelphia, Penna....Poplar 5-0100
Pittsburgh, Penna....Hemlock 1-1200
Pittsburgh Prov. & Packing Co., Penna.....GR 1-2460
Providence, R. I.....EL 1-1400
Chattanooga, Tenn.....6-4725
Knoxville, Tenn.....3-5135-6
Memphis, Tenn.....5-4311
Amarillo, Tex.....6-5246
Corpus Christi, Tex.....6-5246
Dallas, Tex.....Randolph 5901
El Paso, Tex.....3-3621
Fort Worth, Tex.....Market 2101
Harlingen, Tex.....2050
Houston, Tex.....Capitol 1175-5
San Antonio, Tex.....Garfield 5321
Richmond, Va.....3-1876
Roanoke, Va.....7751-2-3
South Norfolk, Va.....66-2441
Seattle, Wash.....Elliot 7180
Spokane, Wash.....Lakeview 1541
Charleston, W. Va.....27-165
Milwaukee, Wisc.....MA 8-6200

AGENTS

Indianapolis, Ind.: A Hoffman Co. State Life Building....Market 8666
Wichita, Kan.: Thompson-Hayward Co. 727 E. Osie St.....5-9606
Nashville, Tenn.: Sanders, Inc. 712 8th Ave., S.....6-7111

In-place field tests point way to most effective use of

PALCO INSULATION WOOL



Newly developed scientific in-place tests now measure installed efficiency of Palco Wool after many years in use. Conducted under actual operating conditions by independent refrigeration engineers, these impartial field tests establish an entirely new concept of low-temperature insulation efficiency. Outlined below are highlights of test data presented in a Technical Bulletin available from The Pacific Lumber Company for more effective application of low-temperature insulation.

EFFECTS OF PROPER AND IMPROPER VAPOR SEAL

Graphs, charts and photographs show actual results of proper and improper vapor seal after many years of operation. They show how low moisture pattern of Palco Wool maintains maximum insulating efficiency even under adverse conditions.

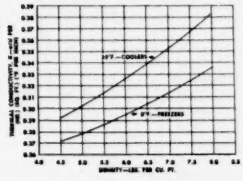
HEAT STORAGE FACTOR ANALYZED

New test methods show how Palco Wool retards heat flow so that it does not reach cold side during peak load period, actually reversing flow of major part of heat stored during daytime hours.

LOW "K" FACTOR OF PALCO WOOL MEASURED

Actual thermal conductivity of Palco Wool in insulated walls of freezers and coolers of various temperatures is shown in design curves based on electrical heat flow meter readings between inner and outer walls.

DENSITY REQUIREMENTS DETERMINED



Graphs and tables based on in-place field test data show ideal density for Palco Wool Insulation to meet various temperature requirements for maximum efficiency under actual operating conditions in coolers and freezers.

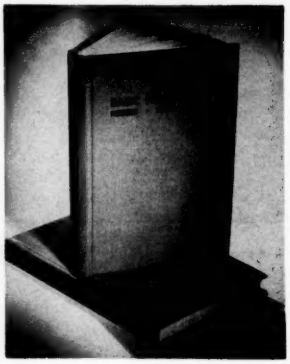
DECREASING MOISTURE CONTENT DEMONSTRATED

Normal moisture content of Palco Wool when shipped averages 15%, while samples from centers of typical refrigerator wall cavities averaged about 9%. Field test data shows how this results in increasing insulation efficiency.

Factual field data never before available from laboratory findings results from these in-place field tests. It offers a practical approach to actual operating problems. To obtain this valuable information with no obligation, request Technical File No. IR-6 today!

THE PACIFIC LUMBER COMPANY
100 BUSH STREET, SAN FRANCISCO 4, CALIFORNIA
35 EAST WACKER DRIVE, CHICAGO 1, ILLINOIS

PALCO INSULATION WOOL



The Book of "Refrigeration Knowledge"

Basic Refrigeration is designed to give a good working knowledge of modern refrigeration principles, equipment and its operation. Beginning with the fundamentals and generally understood materials, it progresses through basic details of equipment to application, operation and servicing of systems.

BASIC REFRIGERATION

PRINCIPLES • PRACTICE • OPERATION

By Guy R. King

29 Chapters—340 ILLUSTRATIONS—526 PAGES COVERING THESE SUBJECTS

- Fundamentals
- Compression System of Refrigeration
- Refrigerants
- Expansion Valves
- Evaporators
- Compressors
- Condensers
- Flow Equipment
- Electric Controls and Control Valves
- Lubrication
- Defrosting Methods
- Compressor Drives
- Food Preservation
- Operating
- Servicing
- Refrigerated Enclosures
- Instruments and Meters
- Heat Calculations
- Humidity in Refrigeration
- Compressor Calculations I
- Compressor Calculations II
- Refrigerant Lines—Pressure Drops
- Brine in Refrigeration
- Liquid Cooling
- Complete Systems
- Carbon Dioxide—Dry Ice
- Altitude and Its Effect
- Absorption Systems
- The Refrigeration Code

Different refrigerants and the various sizes of equipment are all given equal treatment. There are no complicated formulae or mathematics in the book. It develops the subject in logical step-by-step method with clear explanation of all factors.

Special drawings supplement the material in the text and explain basic factors. Of some 340 illustrations, the majority are special drawings which detail fundamental points in an easily understood fashion. Frequent examples are worked out in the text to show step by step solutions.

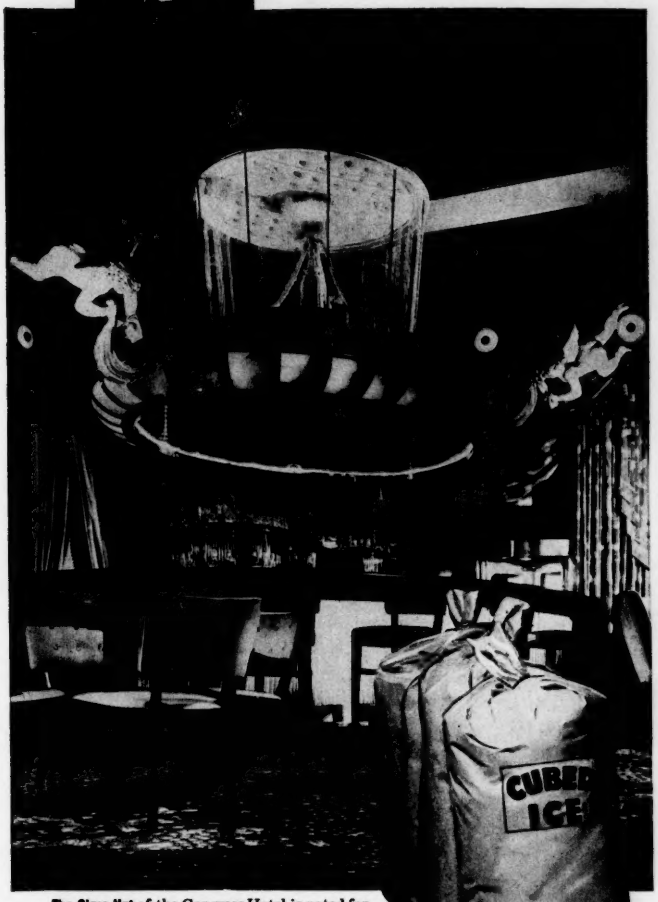
How automatic controls operate and what they do in the system are explained in simple terms. Parts and their functions are shown. This important field, in present-day refrigeration, is covered in a fashion that tells how to use controls and keep them operating to good advantage.

Send for this Book—$6.00

NICKERSON & COLLINS CO., 433 N. Waller Ave., CHICAGO 44

"For a fine hotel, Packaged Processed Ice is a sanitary necessity"

says Nino Bignami, Director Food & Beverage, Congress Hotel, Chicago Illinois



The Glass Hat of the Congress Hotel is noted for its glamour and gaiety on Chicago's famous Michigan Boulevard.

Wet-Strength Paper Ice Bags have tremendous strength even when soaking wet...thanks to a water repellent resin that binds the fibres of the paper firmly together.

The Extra Service That Makes the Sale

SMART BARS and eating places can't take chances with processed ice. It must be 100% free of contamination, dirt, foreign particles. That's why so many of them today insist on processed ice packaged in Union Paper Ice Bags. The wire tie locks out dirt, bars spillage or pilferage.

The Union one-trip Paper Ice Bag cuts your costs, too. The sturdy wet-strength paper—two layers thick—retards melting. Handling is speeded up—at the ice processor, loading dock, delivery point.

You'll find, too, that customers use more ice; it is so easy for them to ice from the handy paper bag.

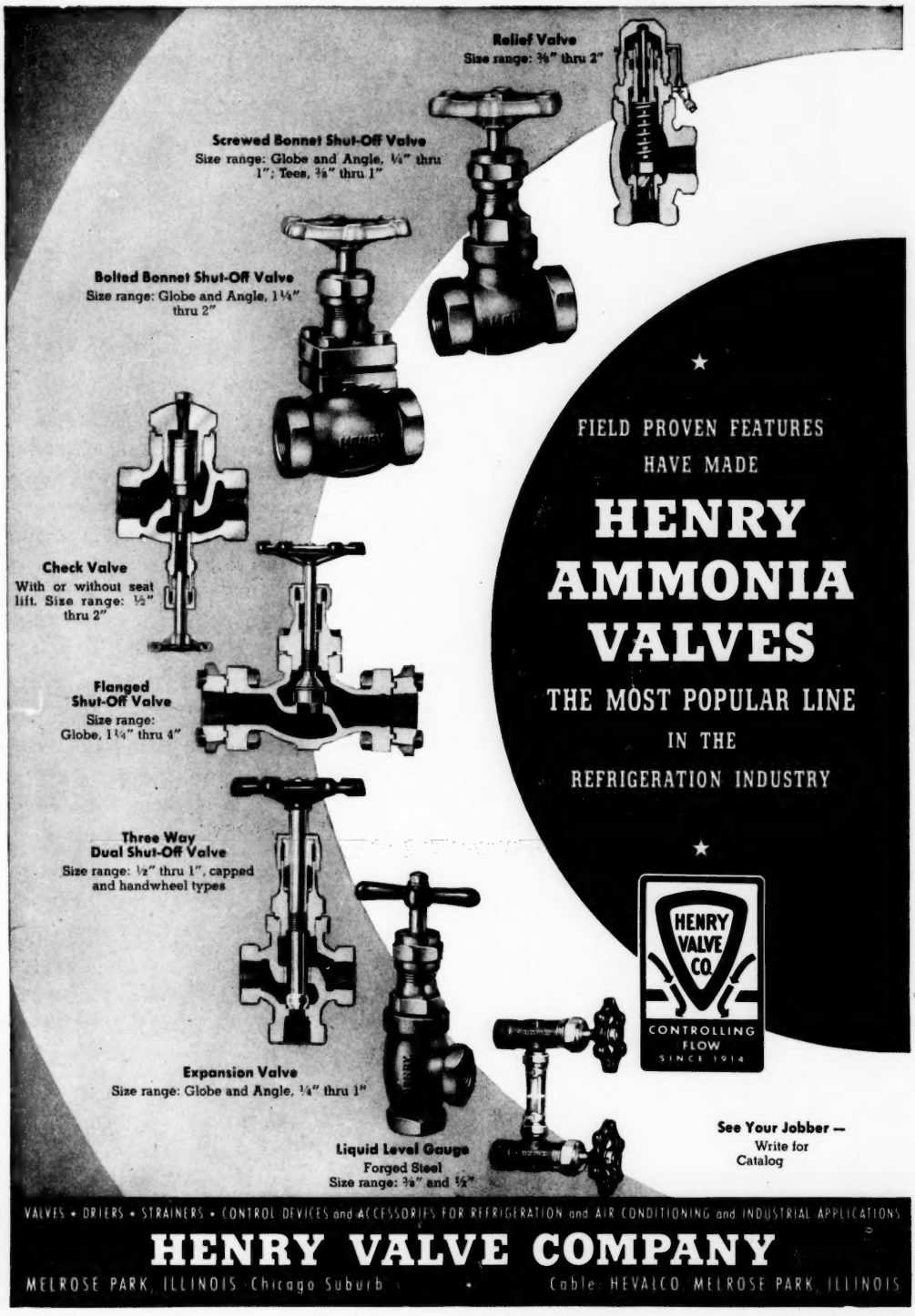
Month after month more ice companies build new business with the Union Paper Ice Bag. Join the parade. Write for free samples today.

ONE TRIP

UNION Paper Ice Bags

A product of the UNION BAG & PAPER CORPORATION • 233 Broadway, New York 7, N. Y.

Bags of Kraft, Transparent Films, Waxed Paper, Classine, Laminates


Relief Valve
Size range: 3/8" thru 2"
Screwed Bonnet Shut-Off Valve
Size range: Globe and Angle, 1/4" thru 1"; Tees, 3/8" thru 1"
Bolted Bonnet Shut-Off Valve
Size range: Globe and Angle, 1 1/4" thru 2"
FIELD PROVEN FEATURES
HAVE MADE
HENRY AMMONIA VALVES
THE MOST POPULAR LINE
IN THE
REFRIGERATION INDUSTRY
Check Valve
With or without seat lift. Size range: 1/2" thru 2"
Flanged Shut-Off Valve
Size range: Globe, 1 1/4" thru 4"
Three Way Dual Shut-Off Valve
Size range: 1/2" thru 1", capped and handwheel types
HENRY VALVE CO.
CONTROLLING FLOW
SINCE 1914
Expansion Valve
Size range: Globe and Angle, 1/4" thru 1"
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Size range: 3/8" and 1/2"
See Your Jobber —
Write for Catalog
VALVES • DRIERS • STRAINERS • CONTROL DEVICES and ACCESSORIES FOR REFRIGERATION and AIR CONDITIONING and INDUSTRIAL APPLICATIONS
HENRY VALVE COMPANY
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In the Spotlight

THE ANNUAL ICE Convention was held November 11-14 at Cincinnati, Ohio, where the National Association of Ice Industries was organized in 1918. A varied program was presented, all pointed toward ways and means of building more profits in the Ice Business. One of the accomplishments was the adoption of a tentative plan to advertise Processed Ice on a national basis. See detailed report starting on page 19.

THE MECHANICALLY refrigerated railway car will be slow of adoption by the meat packing industry but its effects will be far-reaching, according to a representative of John Morrell, meat packers. His talk at a recent Section Meeting of The American Meat Institute is reported on page 26.

A REVIEW of the Ice Industry, in light of new conditions and modern trends was presented in report of Guy W. Jacobs, executive secretary of the National Association of Ice Industries at the 35th annual convention. Mr. Jacobs had some particularly enlightening comments on National Ice Advertising which every ice man should read. See page 27.

ICE in a new form, frozen in the shape of a long tube is being produced by a machine designed by R. A. O'Neill, Corpus Christi, Tex. See page 32 for illustrated description.

THE UNIT ICE Association secretaries held their annual meeting in connection with the annual ice convention at Cincinnati November 11. Reports from various sections were presented and association problems were discussed. See page 34 for report of the meeting.

COVER PICTURE: One of the two tunnels at the Humboldt, Tenn. plant of the Beare Ice & Coal Company. J. Brady Nelson, left, and Judson Pace, right, are dressed to suit the temperature. The room shown contains two tunnels 71 feet long by 16 feet 6 inches wide, by 6 feet high inside. These tunnels are located alongside walls with center of the freezer storage room being approximately 45 feet wide, by 71 feet long by 12 feet high.

THE NAPRE 43rd annual convention was held at Dallas, Texas November 12-14, with an interesting program of papers on operating and engineering subjects. The Dallas Chapter was host, and provided a very pleasant entertainment program. For convention report see page 37.

A JOINT N.A.P.R.E. and R.S.E.S. meeting was held at Los Angeles October 22 for a program of mutual interest to members of both Societies, dealing with automatic refrigeration controls. For report of the meeting see page 49.

COLD STORAGE Holdings for October 31 averaged about the same as the previous month, and were considered normal for this time of year. Coolers were down slightly from last month but freezers were up slightly from last month, but down from last year. Additional details are given in summary of report starting on page 51.

FRICK COMPANY, known throughout the trade as manufacturers of refrigerating machinery is entering its second century. Observing this anniversary the company has issued a historical sketch of its early career and achievements, a summary of which starts on page 57.

60 Years Ago

From the December, 1892 issue of ICE AND REFRIGERATION

THE COLD STORAGE and ice making plant for the Columbian Exposition at Chicago in 1893 was described as probably the handsomest and largest building containing a private exhibit on the grounds. It was to cover a space 130 x 255 feet, five stories high with an imposing tower on each corner 100 feet high with observatories reached by elevators, from which an extensive view of the ground might be had. The central tower, perhaps the most artistic "smokestack" ever erected, was to be 191 feet high and highly ornamental in all its details. The plant was built by the Hercules Iron Works to serve two purposes, to furnish ice and cold storage for food and drink on the exposition grounds and as an educational exhibit of the new science of refrigeration.

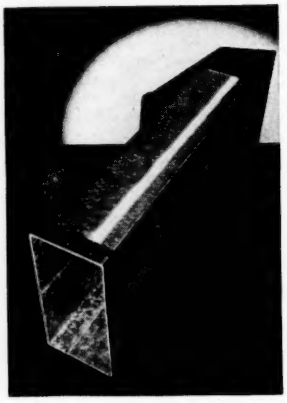
THE OPENING of cold storage houses along the New England Coast is having a beneficial effect on the fishing industry. The trade is an uncertain one, the weather an element which is not to be depended upon. Plants for freezing fish and holding them in storage promise to do a great deal to obviate the difficulty of spoilage by warm weather.

DISCUSSING warehouse receipts at a meeting of the American Warehousemen's Association, I. R. Price of Cleveland, Ohio, said that the laws of the various states differed so widely that it was, he thought, impossible to prepare a uniform warehouse receipt.

AT THE END of the 1892 ice season, a review reports very little ice on hand, notwithstanding the generally large cut of the previous winter. The retail season opened late but the demand continued steady all through the summer months and in many localities well into November. Prices ruled generally a trifle lower and the quantity of ice sold was as great as ever, perhaps in the history of the ice trade.

FLOWERS, for the first time in history, were shipped in ice from New Zealand to London. They were placed in tin canisters filled with water and frozen. The tins were opened at the Royal Aquarium in London and in the middle of a solid block of ice was a beautiful bloom.

KNICKERBOCKER PRODUCTS ON DISPLAY



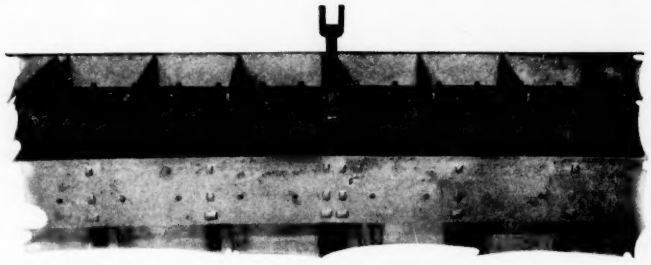
ICE CANS

WELDED OR RIVETED
IF IT IS AN ICE CAN
KNICKERBOCKER CAN CAN MAKE IT!

ANY SIZE — ANY STYLE
HIGH PRESSURE LOW PRESSURE
ARCTIC PAWNALL
ULINE BOTTOM

CAN GRIDS

VARIOUS—
DESIGNS
STYLES
WEIGHTS



CAN FILLERS

For one or more cans.
Will not Leak.
Accurate measurement each filling.

SANITARY

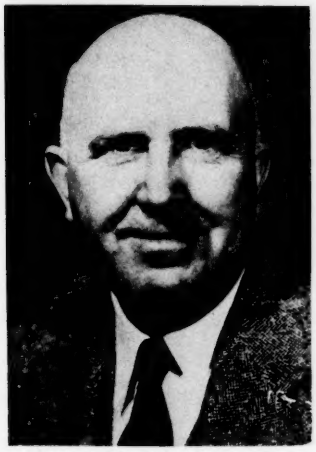
At Your Service — Representatives Everywhere

Cable Address: KNICKSTACO

KNICKERBOCKER STAMPING CO.
Parkersburg, W. Va.

35th Annual Ice Convention Bases Program On More Profit for the Ice Industry

THE basic theme of the 35th Annual Convention of the National Association of Ice Industries was more profits for the ice industry. The convention was held at Cincinnati, Ohio, November 11-14, 1952. The program was planned to cover a wide range of needs and interests, including those who did not and those who did need a renewal of faith in the ice business. Comments from many satisfied registrants established the fact that it did just that.



Wm. J. Ayers, Memphis, Tenn.
President
National Association of Ice Industries

The program included a rehash of old ideas and subjects, with a refreshing addition of new ones. They included convention and association reports, outside speakers, panel discussion of profit making opportunities, advertising and publicity, processed ice, research, merchandising, and other topics, all pointed toward more profits in the ice business.

Opening the second, third and fourth sessions were movie presentations showing the value of courtesy, the National Association film "Naturally Yours," and safe automobile driving.

A surprise visitor was Senator Robert Taft who was at home in Cincinnati at the time of the convention, and who had been invited to make a short talk. He came in near the close of the final session with a comment for the assembled ice men and guests that the American people had decided to try a new product. He said they have rejected government spending and deficit spending as the way to maintain prosperity. They chose between free enterprise and government dependence, which is a complete change in the trend of the last twenty years, and a realization that the government cannot continue to take 25 per cent of the people's income and the people remain prosperous. In regard to foreign affairs he said it was his conviction that the United States can maintain friendships and good relations with other countries without such huge expenditure of money abroad. He said the two and a half months between the election and inauguration day is probably a necessary interval to accomplish the tremendous task of assembling a new administration.

The annual dinner dance, high point of the entertainment program, was held Thursday evening. Following the usual dinner, a very entertaining floor show was presented.

National Ice Advertising is to be renewed, after substantial curtailment

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during the last three years, according to a tentative plan to be presented to the Board of Directors. This is to take the form of Processed Ice Advertising, to be supported by contributions from Processed Ice sales.

Paul H. Andres, Oklahoma
First Vice-President
National Association of Ice Industries

The downward trend of ice sales, according to a report by Guy W. Jacobs, executive secretary, was slowed down almost to a halt last year, from 33,897,798 tons in 1950 to 33,789,502 tons in 1951, and 1952 sales are expected to show increased sales, thereby starting an upward trend. Processed ice sales are much more favorable, registering a gain in number of companies selling ice in this form from 25 percent in 1948 to 41 percent in 1951.

A display of publicity and advertising done during the year by the Advertising and Publicity Department was shown at the entrance to the convention hall. There were hundreds of pieces of advertisements, magazine articles, newspaper stories, brochures and other ice publicity and advertising.

The annual meeting of the Unit Ice Association secretaries was held Tuesday forenoon of the opening day of the convention. Representatives of the National Association reported briefly on national phases of interest to the secretaries. A number of the secretaries also made reports on outstanding association work in their territory.

An educational feature that has become a standby at National Ice Conventions was the exhibits of machinery, equipment and supply manufacturers. Located just off the foyer where convention delegates and visitors registered, it had a very satisfactory attendance from the ice men.

Association dues were established at the same rate as last year, six mills per ton with a minimum of $25. The convention next year will be held in Washington, D. C., November 17-20, 1953.

The Convention Opens

THE convention was opened by William J. Ayers who presided at the first session Tuesday afternoon. He recalled the first meeting of the National Association of Ice Industries which was held in Cincinnati in 1918. Commenting briefly on the program of this 35th annual convention, he said it was designed to offer new ideas and new ways of doing business. The last 35 years, he said, has seen the members of the ice industry coming together in closer cooperation, and that is as it should be.

He said the future outlook does not show any reason for pessimism, but they must all realize that there are problems, which is not unusual, because other industries have them. The selling of ice has gone through many changes, chiefly in the change from block to processed ice, which has resulted in a bigger dollar volume per ton. The markets also have changed from mostly domestic to mostly commercial. One of the biggest problems, which has been only partially met, is how to make ice available where and when it is needed. We need to do more to make it easy for customers to buy ice, he said.

One of the important things the industry needs is research and this can be done efficiently through such cooperative facilities as are provided by the National Association in cooperation with the Unit associations. Another problem is to learn the most effective way of dealing with federal agencies and the present situation indicates that his problem will continue indefinitely. Because of the constantly changing markets and new conditions cooperative action by all ice men becomes increasingly necessary and this can best be accomplished by the National Association of Ice Industries. But if this is to be accomplished as it should be the association must have adequate funds to carry on this necessary work.

In Memoriam

A list of members deceased during the year was read as follows: Paul R. Barbaro, Chicago, Ill:; Theodore S. Behre, New Orleans, La.; Thomas A. Bohon, Louisville, Ky.; John B. Bramstedt, Sr., St. Louis, Mo.; Emerson A. Brandt, Chicago, Ill.; Henry J. Christensen, Washington, D. C.; Robert W. Croker, Cleveland, Ohio; Hugh D'Anna, Plant City, Fla.; Leo D. Duceppe, Montreal, Canada; Walter G. Eisenmayer, Los Angeles, Calif.; Fred J. Fink, Tulsa, Okla.; William F. Ford, Columbus, Ga.; Samuel Freer, Philadelphia, Pa.; Walter A. Howard, Lafayette, Ind.; Robert G. Kirkenburg, Charleston, W. Va.; Maxwell B. Lehman, Indianapolis, Ind.; Herman W. Lyendecker, Haddonfield, N. J.; Frank Lowden, Walla Walla, Wash.; E. G. Mild, Mt. Vernon, Ohio; E. S. Mulley, Kansas City, Mo.; Harry S. Oderman, Detroit, Mich.; Clarence N. Ruh, Chicago, Ill.; Herbert J. Schory, Canton, Ohio; Dr. S. Horace Scott, Coatesville, Penna.; Charles C. Sides, McAllen, Texas; Charles Silbert, Long Island, N. Y.; C. C. Tebbetts, Minden, La.; N. E. Vandyne, Parsons, Kans.; Joe B. White, Fayette, Miss.; Frederick Willard, Holtville, Calif.; George E. Wisener, Steubenville, Ohio; and Robert A. Yunker, Madison, Ind.

Members of the association and guests were welcomed to Cincinnati by R. H. Smith, Willard, Ohio, in behalf of the Ohio Association of Ice Industries. He recalled that their last previous meeting in Cincinnati was in 1918, since which time much progress had been made in association activities.

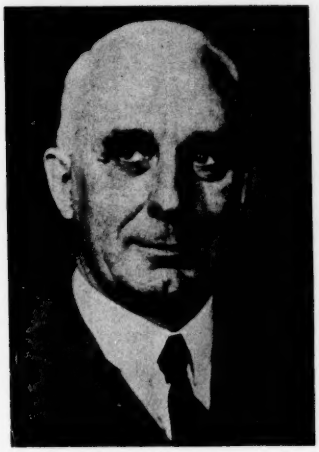
The associate members and exhibitors were recognized by Edward L. Bennett, Somerville, Mass., a past president. He told why the ice men owed their support to this segment of the industry and urged them all to make a special effort to get acquainted with each other.

E. L. Gunn, Jr., Atlanta, Ga.
Second Vice-President
National Association of Ice Industries

Financial Report

The financial report for the year was read by George Steers, treasurer. Mr. Steers said that although some association activities had been curtailed, the association had operated well within the budget set up by the Board

of Directors, although expenditures had exceeded receipts which had created a deficit which will have to be overcome during the coming year. The Public Relations Department operates on a separate fund and this fund has



George Steers, Jr., Kalamazoo, Mich.
Treasurer
National Association of Ice Industries

a considerable balance to be used as a backlog for future work.

Secretary Reports

The annual report on association activities was presented by Guy Jacobs, executive secretary. Mr. Jacobs also recalled the previous ice convention meeting in Cincinnati in 1918. At that time, he said, labor was an important problem. It still remains, but others have been amplified and added, so that new cooperative effort is more necessary than ever before. And in spite of all comments and opinions to the contrary the ice business is a good business and has no more than its fair number of problems when compared to other industries.

Ice sales in 1951 amounted to 33,789,502 tons, compared to 33,897,798 in 1950, a very slight decease, and indicating a curtailment of the downward trend of the last few years. One fact stands out and that is the increasing sales of processed ice. The report shows that in 1948 only 25 percent of the industry offered sized ice to the trade, and in 1951 that figure was up to 41 percent. However, dollar instead of tonnage volume tells a more enlightening story and on this basis there was during 1951 an increase over 1950. Ice prices, he said, quoting from the ICE AND REFRIGERATION survey in May 1952 had shown only a very slight increase over those for 1951. And more companies are realizing that a ton of ice sold for $20 is better than one sold for $9.00 or $10. Even though processed Ice requires a little extra service, the profit gain is more than worth it.

The National Association of Ice Industries, he said, is a two-way street, it needs the ice men and the ice men need it. He said he believed that when they had heard the full reports from those in charge of the departmental activities at this convention that they would recognize membership in the association as the best buy in the ice industry.

On this Armistice Day a tribute to the veterans of America was expressed by Harold O. McLain, a past president of the association.

Outside Looking In

Closing the first session, the keynote address of the convention was delivered by John W. Mock, Evanston, Ill. Mr. Mock said that as an outsider, he had made an effort to get acquainted with the ice industry by conducting an informal survey among ice men. As a result of that survey he had concluded one of the things wrong with the ice industry is that they do not use the literature and sales helps issued by the National Association. And at meetings of grocers, home economists, restaurant and hotel men and others, these industries appear to be more interested in ice and what it will do for them than the ice men are themselves.

But some ice men are doing all right. Not all of them are losing money, and they are not pessimists. One thing they should remember, he said, is that ice is no longer a raw material business, but one in which the raw material, ice, must be manufactured into the kind of product the customer wants. There is no one answer to better business; each ice man will have to solve his own problems in his own way, but brought up-to-date, using the modern merchandising methods that are available to all through the National Association.

Open Forum For Profit's Sake

A STRICTLY practical and very interesting part of the convention program was an open forum discussion on merchandising in its various phases. Scheduled for the morning session Wednesday, an adjourned session was held that afternoon to take care of the unfinished business. Directing the discussion was Paul H. Andres, First vice-president, assisted by David J. Copeland, Atlanta, Ga.; R. W. Davis, San Francisco, Calif.; James R. Dean, Cape Girardeau, Mo.; H. L. Dithmer, Indianapolis, Ind.; Ralph H. Getchell, Jr., Bangor, Me.; John H. Glenn, Beardstown, Ill.; R. C. Muckerman, St. Louis, Mo.; M. W. Young, San Francisco, Calif.

Answering a question as to the possibilities of reducing the cost of producing and handling crushed and sized ice, it was pointed out that both the Technical Department and the equipment manufacturers are constantly working on that problem. One of the obstacles is that the industry is made up largely of small plants which cannot afford expensive machinery and equipment. But bagging and tying machinery is now being marketed and a new automatic ice cuber is being developed, as well as a new automatic crushed ice machine. The problem of surplus snow ice as a by-product of crushed ice is being solved in large measure by the demand for this fine ice for meat and poultry icing.

Regarding methods of transporting processed ice from point of manufacture to sales outlet, it was suggested that a conveyor can be used to load trucks or carry it to any other sales point desired. In this connection it was pointed out that for transportation of appreciable distance, a refrigerated truck will prevent meltage and sticking together of the pieces of ice. If the distance is not too long and not too many stops are made an insulated truck will serve.

Guy W. Jacobs, Washington, D. C.
Executive Secretary
National Association of Ice Industries

Another question was asked as to how people in small towns could continue to get ice where ice delivery had been discontinued. The answer was that wherever ice plants have been sold or deliveries discontinued, ice

Board of Directors and Staff of National Association of Ice Industries in Session at Annual Convention

service has been supplied through a new dealer or from an ice plant in a nearby city. Also establishment of ice vending machines offers a partial solution. Some ice companies have given up domestic deliveries but continue the commercial business, in which case they turn over the domestic trade to dealers, and establish vending stations.

There followed a discussion of dealer and company responsibility, from the standpoint of insurance and personal liability. This is governed by state laws, which differ in some degree. But generally, the dealer is in business for himself, must carry his own insurance, and is responsible for personal liability. However, in this connection it was pointed out that it is important to have a legally recognized agreement in this respect because the courts might be inclined to hold the company responsible in case of a damage suit. A number of companies reported that they prefer company owned delivery routes.

The problem of decreased revenues resulting from fixed costs which cannot be reduced, and declining revenue was answered by one ice plant operator who has contracted to supply ice to other companies in his territory cheaper than they can make it. Many of these smaller companies have found the plan so advantageous that they have dismantled their own ice plants.

Sidelines for the ice business have been established as successful, but a question was asked as to the workability of one like frozen foods which would be marketed outside the ice plant. John Glenn, who has made an outstanding success of several sidelines said they had not ventured into anything which had to be sold outside the plant, except bagged coal which has met with a big demand and for which there is a steady market. One of its advantages is that it provides employment for delivery personnel during the winter.

The bagging of sized ice, it was stated, is an engineering problem and must be adapted to the layout of the plant and other considerations. In discussing this question it was suggested that crushed and sized ice should be made in one operation instead of having to freeze the ice in blocks and then crush or size it. The Technical Department and equipment manufacturers, it was stated, are working on that and expect to have such a machine on the market soon. The actual cost of crushing ice amounts to about 50 cents a ton or less, it was stated, the added cost coming in the bagging, which would be the same with a machine that would produce it directly.

The new product "Sno-Gel" now being offered as a substitute for ice, it was reported, is performing satisfactorily for some services, particularly long hauls. It is not expected however, that it will have much effect on ice sales.

Ion exchange treatment of water was dicussed briefly. It results, in cases where needed, in high purity of ice, but it is not yet known how long it will last.

The five-day week for ice delivery personnel is established in a number of big city markets on a satisfactory basis. One such market which established a five-day week three years ago is now selling more ice than when it was started. It can be done and will not hurt the ice business, according to this manager, but each company will have to work out its own plan.

On the question of maintaining delivery equipment, one of the larger companies makes each driver responsible for his own truck. Another, with a fleet of 70 trucks, lets the work of maintenance out on contract, allowing the truck maintenance man full authority and responsibility, and this has been entirely satisfactory.

The best location for truck icing sales usually is on or adjacent to through highways. But truckers know where truck icing service is available and know where the plants are located. More important than location is to have the kind of equipment that will best and most efficiently service the trucks, including modern blower equipment, rest rooms for the drivers, a lunch counter or restaurant, gas and oil and other facilities.

The best way to advertise ice service depends upon the territory and what is needed. In smaller communities a house to house canvass may provide good results. Personal calls on commercial customers are especially valuable. Newspaper and radio advertising are valuable for general publicity. The sales opportunities for processed ice provides a good subject of advertising. A comment was offered that much ice company advertising comes from the desire of the owner to see his company name in print without closely analyzing the possible results. For ice companies generally the most effective advertising is that which points directly to the point of sale. Television is especially valuable for showing the clearness and sparkle of ice cubes.

Regarding the general subject of vending stations, R. C. Muckerman said his company in St. Louis now operating 70 of these machines, 35 of which are not easy of access to the ice plant. However, he emphasized that they must be easy for customers to reach them and if not they will not be patronized. This company is doing more advertising than ever before with spot radio announcements, signs in the ball park and other media. There are many people who want ice, but a weakness of too many ice companies is that they do not keep them informed as to where they can get it.

Meat-on-Ice

Closing this session a number of questions were asked and answered about meat-on-ice. Answering and commenting on these Prof. R. W. Davis said the most frequent question asked by prospective customers was whether it would work. To provide a complete answer to this question, an illustrated folder had been issued.

This folder says the number of markets using ice in California has now passed the thousand mark and its acceptance as an easy, low cost way to cut losses and increase profits is spreading rapidly. This theme is continued with illustrations of 18 meat markets with counters in which ice is used. A tape recorded interview with Jim Nash, operator of one of the markets pictured, answers all of the questions commonly asked by prospective customers, and to sum it all up a list of 25 advantages of meat on ice is printed on the back page.

This folder Mr. Davis said, had been one of their most successful printed pieces. A companion piece also was used extensively, a four-page folder in four colors, for distribution by meat market operators to their customers. This folder tells, with striking illustrations and text why ice adds to the freshness of fresh meats.

Members on Panel on Profits: Paul Andres, rear, moderator. Rear row: M. W. Young, San Francisco; James R. Dean, Cape Girardeau, Mo.; Ralph H. Getchell, Jr., Bangor, Me.; H. L. Dithmer, Indianapolis, Ind. Front row: R. C. Muckerman, St. Louis, Mo.; John H. Glenn, Beardstown, Ill.; David J. Copeland, Atlanta, Ga.; R. W. Davis, San Francisco, Calif.

Third Session

THE third session of the convention, opened and conducted by E. L. Gunn, Jr., was devoted to convention business, a report from the Advertising and Publicity Department and a report on the meat-on-ice program.

The report of the Nominating Committee, filling positions of division vice-presidents and directors at large was presented by William R. Sneed, chairman, and accepted.

Public Acceptance

Reporting for the Advertising and Publicity Department of the National Association, Francis X. Timmons said that during the last few years, there have been drastic changes in the ice business and the Public Relations Department has accepted the responsibility of getting the public to know more about the ice business. More and more ice men are coming to recognize the power of advertising and publicity and what it has done for American business. His Department, Mr. Timmons said, has accepted the duty of doing for the ice business what advertising and publicity is doing for other business. Appeals to the consumer, he said, is the basic need of all advertising and publicity and this has been and will be kept constantly in mind in all their present and future work.

The work accomplished by and under the direction of this department included trade paper advertisements in grower and shipper magazines, beverage-restaurant publications and grocery publications. By far the greater accomplishments came under the heading of public relation, which means "anything and everything that all of us do and say which gives people an impression about our company and business", and besides what comes out of Washington there are others who mold public opinion; employers, employees, business contacts, suppliers, families, friends, and customers. The ice business is particularly fortunate in being in such close contact with its customers, and through them it is possible to build a vast fund of good will.

Among the valuable publicity articles were those published in Better Homes and Gardens, Women's Home Companion, McCall's Magazine, Colliers, Good Housekeeping, Parents Magazine, Esquire, Quick, Holiday, Household Magazine, Farm and Ranch, True Confessions, Modern Bride and Family Circle.

Trade paper publicity included articles in Hotel, World Review, National 4-H News, Club Management, International Steward, Commercial Food and Hotel Bulletin. A valuable publicity function also was performed through news stories and feature articles in newspapers.

Other commercial publicity included the full-color posters issued by the Tea Bureau; Cooperation with Puerto Rico Rum, the punch that requires a block of ice as the chilling agent; displays at a Home Economists' show; displays at vegetable and grocery conventions.

Other publicity work included preparation of brochures, bulletins, merchandising ideas, coperation with the National Ice Advertising Agency, exhibits and constant contacts with magazine editors. Publicity through the various media used reached 100 million circulation.

A visual demonstration of the work accomplished by the department during the year was a display on twin bulletin boards occupying a space of several feet just outside the convention hall of magazine advertisements, magazine articles, newspaper stories, brochures, etc.

Processed Ice

Attacking the subject of more profits with processed ice, R. W. Davis, San Francisco, Calif., characterized the ice industry as a sick industry. In an age of modern improvements, he said, most ice men are content to plod along almost entirely oblivious to the changes that have taken place and the new demands that should be met, and the downward trend of ice sales. To illustrate this point, a chart was displayed, showing that ice sales had decreased from 49 million tons in 1947 to 29 million tons in 1951. Processed ice sales, on the other hand had, during the same time, increased from 3,890,000 tons in 1947 to nearly 4,300,000 in 1951. In 1952 sales are expected to reach five million tons which will represent an increase of over 20 percent compared with a loss in block sales of 40 percent during the last five years.

Thus we see that processed ice is definitely on the upgrade, while block ice is just as unmistakably on the down grade, and year by year the importance of processed ice in the over-all picture has been growing.

The selling price of processed ice is about $20 per ton. Taking that figure, processed ice in 1951 accounted for a gross volume of over 85 million dollars compared to about 266½ million dollars for block ice. So, in 1951 proc-

Advertising Processed Ice . . .

A NATIONAL Processed Ice Advertising Campaign was suggested by the Committee on Public Information and Marketing at the National Ice Convention and met with substantial favor. The plan is simple, embodied in the following outline:

A National Campaign that will advertise Processed Ice and nothing but Processed Ice . . .

Each individual ice company will help pay for the advertising in proportion to the amount of income it receives exclusively from Processed Ice. No part of income or tonnage on block ice sales will be contributed to this National Advertising.

As suggested, the campaign will be established on a five-year plan and the basis of contribution will be two per cent of the gross sales of Processed Ice per month. The project was referred by the Convention back to the Committee with instructions to present it for approval and the go-ahead signal from the National Board of Directors.

essed ice while running to only 12.7 percent of the total tonnage accounted for 25 percent of the dollar volume. All these statistics, he said, point to the unescapable fact that we must give our customers the type of product and the kind of service that they want, need, and deserve.

Processed Ice Advertising

Briefly reviewing National Ice Advertising from the time it began, Mr. Davis presented a plan formulated by the Public Information and Marketing Committee to set up a national campaign that will advertise processed ice only, and each individual ice company will help pay for the advertising in proportion to the amount of income it receives exclusively from processed ice. No part of the income or tonnage or block ice sales will be contributed to National Advertising.

This plan, Mr. Davis said, was fair and equitable, in that it makes it possible for each company to put into the advertising fund in strict proportion, not the number of tons of processed ice it sells, but the amount of income its processed ice business brings in. The rate of contribution which has been suggested, he said, was two percent of gross sales per month.

In the ensuing discussion from the floor of the convention the general idea was approved and it was suggested that it be made on basis of a five-year instead of only a one-year plan, and that payments be made monthly. Upon motion, carried unanimously, the plan was referred back to the committee on Public Information and Marketing, Walter Blessman of Akron, Ohio, chairman with instructors to prepare a program and present it to the Board of Directors of the Association.

Final Session

THE fourth and closing session was held Friday morning with President William J. Ayers, presiding. Mr. Ayers complimented the members of the convention on their attendance at the various sessions, including this one, and said he was sure they had gained enough information to make their presence well worth while.

Guarding Ice Profits

A general report on the values available from the Ice Association and the necessity of continuing to guard ice profits was presented by William T. Jobe, general counsel of the National Association. Each member of the ice industry and that includes employees, as well as employers, must realize the necessity of guarding ice profits, he said. All industries and all companies are entitled to profits from their efforts and investments. And in doing this they must take into consideration the economic and political and business trends, especially as they affect or have influence upon their business.

Regarding business conditions generally throughout the country the peak of profit for most industries has passed. Business profits for the third quarter this year were lower than the corresponding period of last year and for 1951 they were at the lowest level since 1946. According to government statistics investment returns are currently much better than they were in 1940. According to this then, the final status and future profit possibilities of the ice industry are not too far out of line with those of other industries.

Notwithstanding these facts, however, the amount of money in circulation is rushing toward an all time high. How does this effect the ice industry? A study of its economic welfare from the profit standpoint is made difficult by the present practice of icemen evaluating their net profit position on the basis of tonnage sales. However, the industry is beginning to realize that this practice must be revised in favor of reporting dollar sales.

Of the 35 years since the National Association was formed, 22 of them show increased sales and only 13 years showed decreased sales. According to present information, he said, it is reasonable to hope that the year 1952 will show increased sales.

Processed Ice

The processed ice field is almost virgin territory and this offers the ice industry probably the greatest potential that has ever been thrown its way. It opens the field wide for increased expansion and greater profits and this offers a splendid opportunity to carry on the guardianship of profits ideas. In this present business and economic structure in which we are now living it is necessary for us to create a perfect product and create an atmosphere of confidence among employees and the public and we will be called upon to make decisions that will greatly affect our future.

Regarding the over-all national picture he said that a year from now another convention will be held in Washington, D. C., and at that time they would be able to evaluate the changes. It is the responsibility of ice industry management to meet these changes and new conditions in the way they should be met. The National Association, he pledged, would continue to uphold and protect their interests but he warned that the association will need their cooperation and support and advice in order to provide the members with the facilities and information to accomplish their important task of running the ice business.

As far as Washington is concerned, he said, it will be the purpose of the national staff to continue its efforts to uphold and protect their interests in the great national program as it unfolds in the year ahead. With their help, support and cooperation they would endeavor to be good stewards of the ward-ship they have entrusted to

them. At this time, he said, it is impossible to enumerate the many changes that are to take place within the national government but in Washington at least they will be important and in great number.

Profits Through Research

A report was made by C. P. Austin, director of research, on what the Research Department is doing to create more profits through research. This department, he said, had accepted the responsibility of developing new uses of ice and methods of making ice more efficiently. This program is continuing in operation, carried on by the same conscientious members of the Engineering and Research Committee.

The association research program is directly related to the profits of the industry now and in all the years to come. It has a vigorous and recurring role in creating new and enlarged markets for ice. It has a vital and continuing hope in adapting production to these outlets. It has a permanent and constant place in developing equipment facilities and methods with which to manufacture ice more efficiently and with which to serve customers more effectively.

Commenting on the various research projects he mentioned vegetable icing in retail stores, hydro-cooling and package icing, icing of sweet corn and other fresh vegetables, poultry icing, use of ice in mechanically refrigerated meat display cases, ice vending stations, wet strength paper ice bag, use of ice in mechanically refrigerated vegetable display cases. All of these projects had created results and their conscientious use by the ice industry will mean more profits all along the line.

The program of sweet corn icing particularly brought results. It directed national attention of growers, chain grocers and the Department of Agriculture. The Union Bag and Paper Corporation reports the sale of 315,000 corn bags during the first season which represents almost 4,000 tons of ice. Other companies sold bags for this purpose and the possibilities opened up by trade papers caused many to ice corn in crates. It stimulated interest in icing corn generally and in addition it has encouraged many truck operators to do a better job of protecting their loads with ice.

In regard to a recent news release publicizing adverse comments with relation to the sanitation of ice, Mr. Austin pointed out that this ice was examined only sometime after it had left the hands of the ice company which produced it. According to this report the water supplies from which the ice was made were satisfactory. Block ice from ice manufacturing plants also received a clean bill of health, but sanitary precautions in breaking it up, handling it and dispensing it in this limited investigation were found to be inadequate. The significance of this report from the standpoint of the ice industry, he pointed out, is that members of the ice industry must get their customers to do everything possible to safeguard the purity of the ice after it is delivered to them. All steps in the preparation of processed ice must be examined from the beginning until delivered to the customer and then followed through until dispensed by the customer.

Profits Through Merchandising

One of the most important addresses on merchandising and selling was presented by Morris Shrensky, executive vice-president and general manager of the Katz Drug Company, Kansas City, Mo. Mr. Shrensky called attention of the ice industry to the fact that the drug business also has been going through a critical time and he felt that he had enough problems of his own without bothering with others. He had decided, therefore, to bypass a number of important problems and talk directly from the standpoint of merchandising and selling and planning pointed directly to the consumer.

It is important, he said, to remember the changes of the last 50 years, and continuing change. During this time two world wars created fundamental changes and new problems, but the greatest has been caused by the automobile. From the automobile has come super markets, shopping centers, chain stores, increased suburban living and these are important to the ice industry and suggest a guide for the future. In all this decentralization is an important word, resulting in suburban branch stores, shopping centers and other drifting away from the downtown commercial institutions which are feeling the pinch of this competition.

Applying this to the ice industry it means the necessity of adapting to a changing market and this has resulted in a growing demand for processed ice. There is also a growing trend toward self-service, starting in groceries some years ago but spreading to other stores, including drugs, and now into the ice industry through the vending machine. One of the greatest powers of modern selling is through the service performed by the intelligent and informed retail clerk and, in the ice industry by ice delivery men and their sales people.

People have more money than ever before and there are more people than ever before. These facts should give a tremendous lift to sales planning no matter whether ice or other commodities. This public wants to buy more and they are willing to try new things. Also as a part of this picture there is more leisure time for all workers, laborers, white collar workers and executives. This additional leisure time brings a desire for more commodities, including luxury items and any industry that can't capitalize on sales of luxuries will be missing a bet.

In this present situation there can be an outgrowth of inspiration or defeatism and only those who accept and use their opportunities will be successful, while others will go along the same as they have been going or fail. There are in America, he concluded, great opportunities now as never before.

Board of Directors

An informal report of the Board of Directors was presented by President Ayers. Association dues for next year have been established at the rate of 6 mills per ton on 1952 tonnage with a minimum of $25.00 per year and dues for associate members $50.00 a year. The 1953 convention will be held in Washington, D. C. November 17-20, the hotel headquarters to be announced later.

All the officers of the previous year were re-elected for the coming year, as listed on the first page of this report.

Convention Closes

The convention was brought to a close with an address by Clayton Rand, noted editor and commentator from Gulfport, Miss. Mr. Rand based his talk on general observations with occasional pointed remarks on political and business and economic business conditions. An enormous change took effect in this country on November 4, he said, a change that undoubtedly will ring down through the ages and this change, he thought, is all to the good. One of the faults of America during the last few years, he said, is that we have heard too much about communism and not enough about capitalism. In these changing times, he said, it is necessary for business men, more than ever before to recognize the changes and get in step with the times. There is optimism in the air, he concluded, because the people in general are looking forward. America has not yet reached the pinacle of industrial achievement and he believes firmly that this country is on the verge of the greatest social and economical development in all its history.

Mechanical Refrigerator Cars Slow of Adoption But Effects Will be Far Reaching

THE effects of mechanical refrigeration for railway refrigerator cars will be far-reaching, but their general adoption by the meat packing industry will come slowly, R. W. Ransom, of John Morrell & Company told those attending the Engineering and Construction Section meeting, held in connection with the annual meeting of the American Meat Institute, October 3.

The Morrell Company recently became the first meat packer to enter upon use of mechanically refrigerated cars, as described in an illustrated article in the August, 1952 ICE AND REFRIGERATION.

The search for a good mechanical refrigerator car is nearly as old as the practice of shipping perishable meat products by rail, he pointed out. The search has been speeded by modern economic conditions and by the expanding need for low - temperature transit facilities for frozen foods. "Where the product can not be chilled at loading to a desirable transit temperature, or where heat is generated within the product during transportation," he noted, "additional problems are present which are not readily handled by ice."

Since "it is, and probably always will be, more costly to produce a ton of refrigeration in transportation equipment than within a plant," he pointed out, every effort should be bent to bring lading temperatures to the desired degree before loading.

Technological developments must be credited in large measure for the practicability of constructing a small, high-speed and reliable refrigeration unit as required in rail transport, Ransom said, while the development of self-contained units for trucks and the adaption of air-conditioning equipment for railroad cars helped to foster the hope for a mechanically refrigerated car.

Driver Surveillance Lacking

The rail car installation, he noted, does not have the benefit of constant driver surveillance as does the truck unit, so it must be even more reliable as failure of the unit could cause a disastrous loss of product before discovery.

Morrell, Ransom says, feels that general adoption of mechanical reefers will come slowly, although not so slowly as many predict. Undoubtedly, he added, it will affect many factors of railroading. The elimination of brine drip on trucks, bridges and switches, he pointed out, is one advantage which would doutless accure to the railroads from such a development. When a train can be made up of such cars and rolled straight through to destination without stops for icing, he added, the railroad's competitive position will be enhanced.

On the other hand, he noted, it is still too early to say whether the new development will be adopted rapidly enough to make obsolete the roads' huge investment in icing machinery.

Mechanical Unit Lighter

A heavily-insulated car, fully serviced, is three to five tons lighter with the nechanical unit than with full ice bunkers, Ransom said, and a single unit occupies rather more space than a single bunker but decidedly less than two, so available loading space is enhanced. Cost of the equipped car is a quarter to a third above that of an ice-cooled car, he noted, while figures on depreciation, maintenace, etc., have not yet been developed.

Recipients of goods shipped in the one such car now in use by Morrell (24 more are on order for delivery in the next few months) have been enthusiastic and other dealers have asked when they can expect products to be shipped to them in the cars, Ransom said, adding, "We wish we were going to have more of them for our use immediately."

When it is desired to pre-cool the car before loading, he pointed out, the mechanically refrigerated car is ideal as the time required is much reduced. Accuracy of temperature control is good and all the advantages of forced air circulation are obtained, he said.

From its brief experience with the car, he said, the company feels that it will benefit greatly by the ability of the equipment to hold the temperature of the car lower than was possible with ice and salt and by the control of temperature, air circulation and relative humidity afforded by the unit.

Recording thermometers on the car Ransom said, have been inclined to run out of ink after 1½ to 2 days in transit but loads invariably arrive at the pre-set temperature. While products should be chilled before loading, he said, the unit does provide some insurance against damage to other lading by some portion being loaded too warm. Tests, to the point of abuse, on this point are being conducted so the firm can judge overall performance, he noted.

Of the four makes of such units which he said he knew to be in use (U. S. Thermo Control, which made the Morrell unit, Frigidaire, Trane and Carrier) Ransom reported a total of 288 such cars in use or on order.

The cars which Morrell has or will have are the property of Mather Stock Car Co. and the units the property of U. S. Thermo Control, with the latter firm assuming full responsibility for operation in transit, maintenance and fueling, Ransom said. The company, in effect, is "selling us a stipulated temperature in the car during the time it is carrying a load for us."

Shipping Containers

Morrell customarily loads the car for route operation with all product in shipping containers except for beef and lamb which are wrapped and hung. The thermostat on the unit is set for 34° F., he explained and the car loaded with 30,000 to 35,000 lbs. of product. Beef loaded at 35° F., he said, has arrived in Florida with an internal round temperature of 35° F.; lambs loaded at 36° F. have arrived at 34° F. and lard in quantities of 3,000 to 4,000 lbs. loaded at 55° F. has arrived at 36° F. temperature at the center of the 48-lb. cases in which it is shipped. Appearance of the beef and lamb on arrival in Miami is "almost all the evidence we need to know that the operating conditions (as regard humidity) in this first car are satisfactory," he added.

Morrell's experience with the car to date, he said, has shown an elapsed time of 21 days from one loading of the car at Sioux Falls to the next loading. Refrigeration costs have averaged $45 per trip.

Excess-Profits Tax Probably Will Expire

THE excess-profits tax will probably be allowed to expire next June 30 according to news reports. It has been described by the Secretary of the Treasury as "the most difficult tax to administer that has ever been conceived." Congress would have to approve an extension of the law to keep it in operation beyond June 30.

THE ICE INDUSTRY

NATIONAL ASSOCIATION OF ICE NDUSTRIES

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Second Vice-president
E. L. GUNN JR., ATLANTA, GA.

Treasurer
GEO. STEERS, JR., KALAMAZOO, MICH.

THIS MONTH IN BRIEF

The National Ice Association is a good business buy for ice men, said Guy W. Jacobs in his report as Executive Secretary of the Association at the 35th annual convention held in Cincinnati. Mr. Jacobs reviewed the trends of the last few years and outlined the future program.

Results of a survey among Canadian ice men show considerable activity in the sale of ice refrigerators.

Ice in a new form, frozen in the shape of a long tube, is being produced by a new ice making machine. These tubes will be sawed into short pieces, replacing ice cubes.

"Sno-Gel", advertised as a cooling medium that does not melt, is used chiefly for packaging and shipping perishables in less than truck or carload lots.

The annual fall meeting of the unit ice association secretaries was held at Cincinnati Tuesday forenoon, preceding the opening of the National Ice Convention.

The National Association A Good Business Buy

GUY W. JACOBS
Executive Secretary
National Association of Ice Industries

ON BEHALF of the National Association of Ice Industries, I want to add my word of welcome to our 35th annual convention. Turning 35 years old, we think, is quite a landmark for an Association, just as it is for an individual.

The First Convention

Because of this anniversary, I took time the other day to look through the printed record of our first NAII convention. We held it here in Cincinnati, back in 1918. Believe it or not, I happened to be at that meeting, myself, and at every one that has been held since then. Glancing through the proceedings, I found it most interesting to read what we talked about on that occasion. World War One was in progress and the big problem was conservation. There were speeches urging conservation of ammonia, conservation of coal, and conservation of hay and oats in delivery.

Shortweighting by peddlers was hurting the industry's reputation. Labor was giving our companies plenty of trouble. Someone complained that he had to pay his workers three dollars a day. Because it was hard to get help, the demand for Ice was hard to fill. The shipment of natural Ice in railroad cars was complicated because there was no one to unload it. One man reported that his company had patriotically held back inflation by keeping its price on home delivered Ice at 45 cents a hundred.

The highlight of the convention was a rousing talk on war sacrifices by a speaker from the U. S. Food Administration. When he finished, the entire convention leaped to its feet and sang, "We will lick the Kaiser if it takes us 20 years."

Well, perhaps this will remind you that even in the good old days B. C.—Before Competition, that is—the Ice Industry had its problems. Things have hardly ever been perfect in this or any other business. At least they never seemed perfect to those who were around at the time.

The Outlook Now

It would be pretty difficult to claim that the outlook for us right now is anything like a perfect one. Our national tonnage is only 64 percent of what it was five years ago. A few smaller companies are finding the struggle too much for them. Our competition is making it interesting for us in every market, including the ones our own research has opened.

Yet, despite the hard row we have to hoe, I firmly believe that the Ice business is a good one and that this is a good time to be in it. I share the view of one of our officers who stated at a recent meeting that, if he were a young man starting out today, he would again choose the Ice business. He said that it offers fewer problems than most other lines, and just as great a chance for success. A man with initiative and imagination can still thrive selling Ice. Note that I said "selling" Ice—not sitting back waiting for people to buy it.

Ice Sales

Now, every year the National Association compiles and furnishes to the Industry a report on Ice sales for the previous year. This year was no exception. And although you have all supposedly read our latest report, I want to go over it briefly. I feel that our findings for 1951 were more than usually significant.

We make up this statement, by the way, from a survey of more than 2,000 Ice companies. Because that takes in the largest companies, the figures are very reliable. Altogether, these 2,000 companies acount for an overwhelming majority of the national Ice production.

Total Ice sales in the country last year were 33,789,502 tons. For 1950, the year before, they were 33,897,798 tons. Working out the difference, that shows a decline of .32 of 1 percent. But as Dr. Gallup discovered in 1948, it is easy to be a fraction of 1 percent off in any poll. Allowing ourselves 32 hundredths of one percent

error, and assuming it could be an *under*estimate, we can say that sales for 1951 equalled those of 1950. After four years of a steep decline, just think what an important change that is. In 1948 we dropped 6 million tons. In 1949 we fell another 5½ million. In 1950 our sales plunged 7½ million more. But in 1951 we held the line.

Of course, 1951 was our best season in four years from a weather standpoint. No one could deny that the high temperatures played a part in halting the drop-off. But they weren't as influential as you might think. Only certain sections had a hot summer. Others had as cool a season as the year before. And in those cool areas Ice sales tended to level off instead of dropping at the same rate. In short, the companies which suffered another poor season were finding ways to hold their own. They did not continue to lose sales to competition—not to the former extent, at least. More likely, they were finding new sales—exploring the new Ice markets our research has developed.

So we can take vast encouragement from our overall sales for 1951. But even better reading is the breakdown of those sales. 4,289,000 of those 33 million tons were processed Ice. And that total is definitely a jump in the right direction. It is approximately 7.8 percent above the processed sales for 1950. Our block Ice sales have declined, but our processed sales are climbing.

Processed Ice Sales

That climb is significant. It means that the gospel of "Sell the same amount of Ice for twice the price" is catching on. More companies are processing Ice every year. More companies are realizing that a ton sold for $20.00 is somewhat better than one sold for $9.00 or $10.00. Even though processed Ice requires a little extra service, the profit gain is more than worth it.

In some divisions the increase in companies supplying Ice in processed form is really spectacular. Almost 19 percent more companies in the Mountain States began to sell crushed Ice last year. More than 18 percent of the companies in New England added Ice cube service. There was a 7 percent increase in the Southwestern companies providing sized Ice. And in the Southwest, 7 percent is a good many companies.

It is amazing how sized Ice service has risen in a relatively short time. In 1948, only 25 percent of our Industry offered sized Ice to the trade. In 1951, that figure was up to 41 percent.

There can be just one goal in this matter of processed Ice service. We want 100 percent of the Ice companies in America to swing over to the profit side. We want every company to meet the demand we are positive exists in its community. The markets are being created. With advertising and publicity we are reaching a wide scope of prospects. With research we are giving you the facts to close the sales. But practically all of those sales are for Ice in ready-to-use form. The steps we are taking to promote processed Ice will be of little help to the company which doesn't make it available. Remember, block Ice outlets are more or less static, but processed Ice outlets are growing. Why not bet on the sure thing?

Dollar Is Tonnage Volume

I can't touch on the subject of profit without mentioning dollar volume. I hope in the not-too-distant future our annual sales report will cover dollar income first and tonnage as a secondary item. At our Board meeting in July, one member said his company's income had remained steady for the past three years, though tonnage had declined sharply. That is as it should be. When sales fall off, and costs go up, one has to gamble on charging more for his product. In the case of Ice, it's no great gamble. Customers are always willing to pay a reasonable price. Incidentally, it takes very little arithmetic to show that while food prices rose 125 percent between 1940 and 1951, Ice — a related product — rose only 40 percent. I think you'll agree we have had little to do with causing today's inflation.

The annual survey by ICE AND REFRIGERATION tells us that the average price for all classes of Ice this year is $9.49 per ton. Last year it was $9.08 and two years ago it was $8.71. These figures would indicate that the Ice Industry has been very conservative in its pricing policy.

Well, I've talked a good bit about what kind of an Ice year 1951 was. A lot of you may be thinking, "Last year is already history. We've been through most of 1952. Now, how does it shape up? Are we still holding our own?"

1952 Sales

I can give you an inkling of the answer to that, though I'm wary of making predictions. Only a few weeks ago—September 30, to be exact—we queried a group of key Ice companies as to their estimated sales. We asked them what tonnage they anticipated this year, and how it compared with last year. We hit every part of the country in order to get a cross-section.

If you tried to establish a geographical pattern from the replies, you wouldn't get to first base. One company in Florida reported a 9 percent increase, another in the same state reported an 8 percent drop. Out of three companies in Louisiana, one expected to break even, one was down 15 percent, and a third was up 10 percent. A North Carolina company estimated a 2 percent loss, another a 33⅓ percent increase. You could hardly say any condition was general throughout a certain area, let alone the whole country.

However, we did the only thing possible to get a national picture. We averaged the pluses and minuses to see which came out on top. The winner was the pluses, again by less than 1 percent. In other words, for this particular group of companies, the average gain in sales was greater than the average loss. Their total tonnage will be more in 1952 than it was in 1951. Mind you, this is only a sampling. We have no idea what the final story will be nationally. Knowing that over most of the country the weather did us no harm, our feeling is one of cautious optimism.

The survey does prove that business this year was more widespread than in 1951. No one section had a corner on prosperity nor on depression. We think this is a healthy sign. It shows that an Ice company can still succeed in any of our ten divisions. It shows that there are customers for us wherever we make an effort to find them. Extreme situations may develop in certain localities, but, by and large, in any area Ice can be sold in profitable quantities. The "plus" companies in our survey are proof.

Later on in the convention program you will get direct reports from others on the Association staff as to their individual departmental activities for this year. This being the case, it would be repetitious for me to give you such a summary now. Besides, it would make my remarks quite lengthy—and having just been through a presidential campaign, I think we are all cured of long-winded oratory for some time. Just these few comments:

Departmental Activities

I hope when you have heard our staff reports you will be more convinced than ever that NAII was "your best business buy in 1952." That was a slogan we used in our membership campaign this year. In the two folders we sent out we tried to show you that since the National Association is your spokesman, you ought to have a voice in it. You ought to know what we are saying and doing on your behalf. For the National Association is recognized as the Ice Industry itself by government agencies, by other industries, by information media, by the universities in which we conduct research. If you are not an Association member, you have no vote in the way we represent you to these organizations.

Association membership is a two-way street. Your support of us boomerangs back in the form of help for

you. You enable us to run research projects—and with the facts we find, you can get new customers. You make it possible for us to maintain a legal department. In return you get direct representation in Washington, resulting in such benefits as price decontrol. Your support provides us a public information and marketing department. Your reward is merchandising and publicity aids, ice promotion in national magazines, reports on what other icemen are doing. In effect, your payment to NAII puts a staff of full-time experts to work on your own business operation. Frankly, most companies couldn't afford to employ this kind of highly specialized help, but they can do it through the Association.

More Problems

Both your problems and the Ice Industry's problems are going to get greater and more complex in the future. More and more every Ice company operator, in my opinion, will need the assistance of specialists on technical, legal and merchandising questions. More and more the Industry will need to strengthen itself through united effort. So in two ways your membership is guaranteed to increase in value.

If you are a member, take advantage of the research, the legal counsel, the merchandising and public relations ideas available to you. If you are not a member, at least investigate what the Association has to offer. There must be reasons for members to give us the kind of testimony we quoted in our second folder. One said, "Every part of our business has benefitted from the Association." Another declared, "Our future lies in the hands of NAII." A third put it even more strongly. He said, "How anyone in the Ice business can be without NAII services is beyond my comprehension."

Please use all your membership privileges—and please live up fully to your membership obligations. Let us have information we ask for as quickly as possible; it's essential to our work. Give us accurate figures when we take our sales survey. Pay dues on the basis of your actual tonnage—no more and no less. So far we have had no trouble with companies *over*paying their dues. We don't have too much trouble the other way either, but I ask you to consider this: If you are an Association member, we are your employees. We are working at all times to make your business better. The greater our resources, the more we can help you. Therefore, by paying your dues in full, according to the basis determined by your fellow Icemen, our Board of Directors, you not only enable us to do the best possible job for you but you keep faith with your fellow members. Your membership implies that you will carry out your financial agreement with NAII.

National Promotion

Now, as a kind of ground-breaking ceremony, I want to speak to you briefly about the importance of promoting our Industry on a national basis. We talk a lot about being at a crossroads so far as our sales are concerned, turning a corner, and so forth. I think we are at a similar juncture in our promotion program. In fact, the two turning points are parallel. If we hope to again push upward in sales, to regain the ground we have lost, we must take some positive steps toward making our product a household word. We must reach the public at large—not only selected commercial groups.

We are striving hard, through research and salesmanship, to hold our commercial markets and gain new ones. That, we should never discontinue. But, if we are still interested in the domestic market—and I think most of you are—we ought to make similar gestures toward it. This is especially true since we're after a new phase of the domestic market. We're trying to recapture customers we lost years ago, in most cases. We're planting a novel suggestion in their minds. We want them to think about us in an entirely different way. And that takes a bit of doing. Remember, they haven't thought about us at all for a decade or more.

It isn't enough to do this on the local level. People simply aren't impressed any more unless ideas are presented to them on a big scale. Competition for their attention is too keen. A brand name doesn't become established unless people see it printed in Life, or hear it mentioned by Arthur Godfrey, or see Betty Furness demonstrating it. Local promotion is fine, but for real sales impact it takes the one-two punch that national promotion gives. That applies to Iceman's Ice and its uses, just as it does to any other product.

Previous Promotion

I wonder if many of you realize how our national promotion has slipped from its peak of a few years ago. Since I started out in a reminiscent mood, perhaps I can take another look backward with you to illustrate.

Remember 1935 in the Ice Business? It wasn't too much different from 1952. Our tonnage had fallen to 34 million after having hit 57 million only four years before. We were not the happiest bunch of businessmen in the country. Yet at our Convention in Chicago that year, we had the foresightedness and the sound sense to—if you will pardon the expression—seize the bull by the horns. We took a look at ourselves and decided the best thing we could do was to build a program of good will. I probably should say to REbuild good will, because we had been angrily throwing a lot of it out the window.

Anyway, we set out to win back our customers, or at least to hold the ones we still had. Though times were bad, we pooled enough money to start a national advertising campaign. We began rather slowly by sponsoring two network radio shows—Parties at Pickfair with Mary Pickford and songs by Gladys Swarthout .Later we launched another program, The Homemakers' Exchange.

At the same time we set aside funds to step up our magazine advertising. We ran only a few advertisements in 1936, but we tripled the number in 1938. During the six years from 1935 to 1941, we ran 137 ads in consumer magazines and 45 in farm publications. These were in addition to 438 advertisements in trade magazines. In all, we were spending $350,000 a year for getting our message across to the public.

Also as part of our promotion, we were maintaining a Consumer Service Department, headed by Mrs. Peggy Porter. Mrs. Porter and the girls she trained educated housewives in the home uses of Ice. They spoke before clubs, visited schools and knocked on doors all over the country. We prepared and they handed out tons of educational material. We spent thousands of dollars to support this activity over the years.

The results of all this promotion were tangible. For example, our good friend, Ed Vail, of the Ice Refrigerator Manufacturers Association told us that Ice refrigerator sales jumped from 200,000 in 1935 to twice that figure in 1936.

Yet even with such convincing proof we lost our faith for a while. We dropped national advertising in 1942. Our only promotion that year was Consumer Service work. But—to our credit—we saw the folly of this in a hurry. When there wasn't any good publicity about us, we learned, there was bad publiicty. In an uphill battle like ours, we found that you have to keep using the DDT or the mosquitoes will bite you to death.

Activities Revised

So in 1943 we revived our National promotional activity by organizing National Ice Public Relations. Setting our levy at two cents a ton, we raised a quarter of a million dollars from 573 subscribers. Because of wartime restrictions, however, we were able to wisely invest only 50 thousand. Next year we lifted our sights even higher. We boosted the levy to 3 cents a ton and raised 340 thousand dollars. We spent about a third of this, running ads in consumer and trade publications. During 1945 we also expanded our publicity program. We added a director of advertising and publicity to our staff

and engaged a public relations counsel in New York City.

Through the next two years we really hit our stride. 1946 was the high point. That year you subscribed nearly three-quarters of a million dollars for public relations. Seventy-five percent of it went into advertising. We had 40 full color ads and 30 black-and-white ads in consumer magazines. We had 56 full-page advertisements in grocery magazines, 68 in beverage papers, and 137 in home economics publications. We arranged tie-ins with several ice-using industries. We kept Andy Andrich on the road giving iced produce demonstrations. We exhibited at 17 national conventions of other groups. We produced our Industry movie, Naturally Yours.

Nineteen forty seven was nearly as good. We raised half a million dollars and had an extensive advertising campaign in all media. We made up the booklet "How to Get More For Your Money When You Market."—one of our best investments.

Then in 1948 ice public relations began to slip. Subscriptions dropped to 300 thousand dollars, and in order to keep a full campaign going, we dipped into our surplus funds. We spent $70,000 more than was subscribed. In our advertisements we started to talk more about buying genuine Ice for parties and less about the Ice refrigerator.

The following year we cut the subscription levy to 1½ cents per ton, but still raised 300 thousand dollars. We ran the advertisements with the headline "What Three-Letter Word?" We still had our field service demonstrations by Mr. Andrich. We spent nearly $50,000 on trade paper advertising. But again we had to borrow $60,000 from our rainy-day fund. We figured it had started to rain.

The Public Relations Department received subscriptions of less than $150,000 for the fiscal year 1950-51. We placed small black-and-white advertisements in consumer magazines, with only a few full-page color ads. We abandoned the Field Service work. We had to take the biggest bite yet from our surplus account—over $100,000.

The Present

Finally, we are up to the present. You all know generally what the story has been in 1952. No separate fund was raised for Public Relations. That department was combined with Marketing. We had no consumer magazine advertising. Our advertising totalled 66 ads in commercial publications; the budget item for these was only $23,000. For the whole Public Relations program—advertising included—we tapped the remaining surplus fund some more. Since there was no new money subscribed, that was all we could do.

Now, I would like to compare our promotional effort of five years ago with that of today. In 1947 we made ten times the expenditure for national public relations that we made this year. Nearly $700,000 then against less than $70,000 now. Let's see how that matches the change in our business. Our tonnage is now two-thirds of what it was then—not one-tenth. Our dollar income is now three-fourths of what it was then—not one-tenth. True, our overhead is higher today—but it isn't ten times what it was.

In other words, we aren't promoting Ice nationally in a ratio anywhere approaching that of the past. And, as I have emphasized, we need this promotion now more than ever. I might even say it could be our salvation.

Future Promotion

I believe this Industry as a whole is more promotion-minded than our present effort indicates. The same companies make up the National Association that made it up five years ago. I doubt that any of them have lost faith in advertising, publicity, or other public relations activities. I think it would give every Iceman here a tremendous thrill to see his Industry get back into the promotional big leagues. It would boost his morale—and his business.

I hope you will recall some of these facts when you come into this room Thursday morning, and I also hope you will accept the challenge that will be thrown out to this old Industry of ours.

Exhibitors at National Ice Convention

AS PART of the Annual Convention of the National Association of Ice Industries at Cincinnati, displays of machinery, equipment and supplies were presented. This was a valuable and interesting feature and it attracted a number of ice industry visitors. The following exhibitors were represented in the various displays:

Ballard Sales Co., Fort Worth, Texas
Bateman Foundry & Machine Co., Inc., Mineral Wells, Texas
Sam Bonart Uniforms, Inc., New Orleans, La.
The Chatfield & Woods Sack Co., Cincinnati, Ohio
Frick Company, Inc., Waynesboro, Pa.
Gifford-Wood Company, Hudson, N.Y.
Hall Machine Shop, New Smyrna Beach, Fla.
Hamer Machine Company, St. Louis Park, Minn.
Ice Carvings Co., Hollywood, Cal.
Ice Cooling Appliance Corp., Morrison, Ill.
Ice Plant Equipment Co. Inc., Philadelphia, Pa.
Index Coupon and Supply Co., LaPorte, Ind.
Insulated Clothing Mfg. Co. Inc., New York, N. Y.
Knickerbocker Stamping Co., Parkersburg, W. Va.
The Lilly Co., Memphis, Tenn.
Jos. A. Martocello & Co., Philadelphia, Pa.
National Rejectors, Inc., St. Louis, Mo.
Nickerson & Collins Company, Chicago, Ill.
Ohio Galvanizing and Mfg. Co., Niles, Ohio
Perfection Ice Scoring Machine Co., Fort Worth, Texas.
Poloron Products, Inc., New Rochelle, N. Y.
Progress Refrigerator Co., Louisville, Ky.
Refrigeration, Atlanta, Ga.
Refrigeration Engineering Co., Montgomery, Minn.
Union Bag & Paper Corp., New York, N. Y.
Vivian Manufacturing Co., St. Louis, Mo.
Henry Vogt Machine Company, Inc., Louisville, Ky.
J. H. H. Voss Co., Inc., New York, N. Y.
York Corporation, York, Pa.

Meeting Competition From The Little Ice Makers

A REPORT FROM Harold T. Smith, Smith Ice Company, Champaign, Illinois, says that during the heat wave this summer, he noticed several of their customers who had purchased small ice making machines at the ice company's docks buying ice. To establish good relations, he made a special effort to speak to them. He called their attention to the attractive Tea Association poster and furnished them each one, now prominently displayed either inside or in their front windows. These restaurant men claim they are selling considerably more iced tea, a profitable item. The ice company is selling these restaurants regularly, and this makes the ice men happy. Mr. Smith gives full credit to cooperation between the National Ice Association and the Tea Association.

American Ice Dividend

THE American Ice Company has voted a dividend of $3.00 on the six per cent non-cumulative preferred payable December 12 to stock of record November 14. This brings payments to $6 00, the same as in 1951.

Survey Shows Sales Of Refrigerators in Canada

RESULTS of a survey among members of the Canadian Association of Ice Industries show considerable activity in the sales of ice refrigerators, 23 reporting that they do sell refrigerators and only three that they do not.

The questionnaire used in the survey and summaries of answers were as follows:

Are you now selling Ice Refrigerators?

Answer: Yes, 23; No, 3.

Does your present supply and 1952 sales indicate that you would be purchasing refrigerators for sale next year? If so, how many?

Answer: Approximately 275.

At what maximum selling price do you think refrigerators should be sold?

Answer: Ranging from $60 to $120, with the majority of replies less than $100.

What mark-up do you think is necessary?

Answer: Ranging from 10 to 50 percent, with the average about 30 percent.

Size of Refrigerators.

Answer: 6-100 lbs.; 4-50 lbs; 16 both 50 lb. and 100 lb.

What sugestions would you make to increase the sale of ice refrigerators?

Answer: The refrigerators must be well insulated; sold at a small profit with a $5 commission to the serviceman. Personal contact with those customers who are now using antiquated refrigerators. Low down payment and liberal trade-in allowance. Make it possible for ice dealers to stock refrigerators without incurring too heavy investment of capital. Set up complete sales plan including trade-in, time payment and commission. Energetic selling and advertising plan by all members along with Canadian National Ice Advertising. Persistent personal effort including door to door sales and purchase plans. A crisper tray that slides easily in and out. More advertising and direct selling. Hard work by dealers, backed up by local advertising. Find an efficient, easy to install device for getting rid of the drip pan. Develop some positive means to prevent drains from clogging.

What suggestions would you make for improving present ice refrigerators?

Answer: Insulate them well. Easier closing door locks. More positive acting trouble-free hardware. More modern exterior with streamlining. Door shelves. A better price on a smaller streamlined model. Plastic vegetable bins across bottom shelves. Addition of the grid to hold ice level in bottom of ice chamber. Interior lights.

Are you interested in methods of financing the purchase and sale of refrigerators?

Answer: Yes, 7; No, 14.

Insanitary Ice Raises Problem for Ice Industry

ADVERSE publicity for the ice industry has raised its head again, this time in the form of a newspaper story carried by the Associated Press reporting a paper read by V. D. Foltz of the Kansas Agricultural Experiment Station to the American Public Health Association.

Dr. Foltz is reported as saying that crushed ice and ice cubes served in public eating places "can be insanitary and may even be loaded with germs, or it may be contaminated with everything from dirt to pieces of hair and bits of waitress' finger nail polish."

Ice in water or drinks or on foods may actually sometimes be the cause of food poisoning, diarrhea and other illnesses, he said. He said that ice usually is pure when it's made in ice machines because of pure water supplies and health standards to keep the ice pure. But no one, he says, seems to have studied what can happen between the time pure ice is made and its serving to the public. He urged action to keep the crushed or cubed ice sterile.

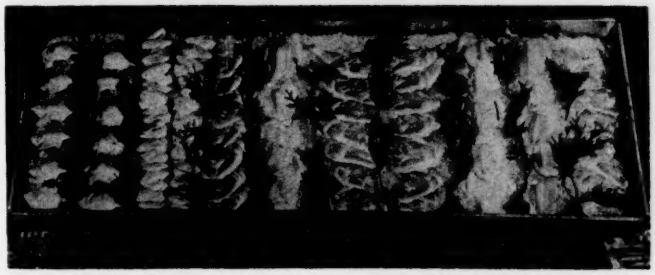
Reports reaching ICE AND REFRIGERATION are to the effect that in this statement made by Dr. Foltz, he was using ice as a vehicle to illustrate the lack of proper sanitary precautions in eating and drinking places. It also is quite apparent that the contamination which he mentions must have occurred after the ice had been delivered to the place of consumption, as evidenced by the bits of hair and finger nail polish which could not have come from an ice plant. In fact, in the latter part of the news report it states specifically that ice is pure when it is made and that any contamination of manufactured ice occurs after being delivered by the ice man or, in the case of point of use ice makers, after it leaves the ice machine.

The significance to the ice industry of this is not new, but a reiteration of the problem of sanitary ice. Briefly, this is the necessity of renewed precautions to see that the utmost sanitation prevails in the manufacture and delivery of sized, crushed, and cube ice and, going a step further, to caution the people who dispense it, serving it in drinks and food in their eating places, to use more care in keeping it sanitary. To do a thorough job it may require customer education.

Refrigerator Car Shortage

TRAFFIC experts predict a severe refrigerator car shortage in the making because of an unusually heavy Fall movement of perishables, particularly from the West, according to Produce News. An average of ten cars shortage per day was reported on one Western line, for the week ending October 11. Carriers are urging that everybody concerned make special efforts to speed help to areas needing cars to offset any threatened shortages.

Display Shows Use of Ice For Poultry



AN EXHIBIT of dressed poultry on ice, prepared by Cornell University was a feature of a three-day exposition held in Syracuse, N. Y. by the Northeastern Poultry Producers. More than 5,500 people registered for this meeting.

The Cornell University display occupied a total of 45 feet of space. It was an eye-opener to the small poultry producers and many county agents were found to be entirely unfamiliar with this use of ice for displaying poultry.

The Ice Industry

Bulletin Digests Controls For The Ice Industry

A COMPLETE review of the existing government control program as it pertains to the ice industry has been issued by the National Association of Ice Industries. This digest, it explains, is for the purpose of bringing ice company management up to date on the government controls that still remain in full force and effect. It is designed to give particular emphasis to those control measures believed to be the most important and of the greatest current interest to the ice industry.

The controls have for their basic authority the Defense Production Act, the Selective Service Act, and a series of Executive Orders by the President as the Chief Executive and Commander in Chief of the Armed Forces. As such, they are subject to the fullest legal enforcement.

The enforcement of controls stemming from the Defense Act is in the hands of the National Enforcement Commission which has power to process legal sanctions plus heavy tax penalties. Employers should not take the chance of ignoring or otherwise running afoul of these control measures. Interestingly enough, several cases involving violations of World War II controls are still in litigation. These controls are still applicable to every individual ice company operation except in those instances where specific exemptions, relaxations, etc., have been granted. For example, decontrol of ice prices, Regulation W, etc.

The important controls are summarized as follows: Priority and Allocations, N P A; Price Control, OPS; Wage Controls, WSB; Salary Controls, SSB; Installment Credit, Regulation W; Selective Service.

Tube Ice Process New Way of Making Ice

ICE in a new form, frozen in the shape of a long tube, is produced by a new ice making machine developed by R. A. O'Neill, Central Power & Light Company, Corpus Christi, Texas. Mr. O'Neill says he has discussed the new process with only one ice producer, and they were very receptive of this method of ice manufacture for their crushed ice business, and probably will install this equipment in one of their tanks at an early date.

Showing new ice tube just frozen.

The idea behind this development, Mr. O'Neill explains, is to freeze ice in a form closer to the crushed or sized ice which now accounts for a large part of the commercial ice business. In this machine ice is frozen in a cluster of some 70 tubes, each about 40 inches long with a diameter of 1¼ inches. It is expected that a hexagon or seven sided shape will be used. Circular and square tubular forms also have been used.

Speedier Freezing

Speedier freezing, more uniform equipment, and the fact that practically every piece of present block ice equipment may be used are pointed out as advantages. It will freeze the tubes in about 1½ hours as compared to about 48 hours needed to freeze 300-pound blocks of ice. Tubular ice is more uniform in quality. Air can be passed through each tube to make clear ice. No air is needed if white ice is desired.

Another advantage is that tube ice is nearer the form of processed ice, the sales of which are increasing. Widespread use of tubular ice will eliminate the necessity of running block ice through a crushing or sizing machine, or a cuber. The tubes of ice will be sawed into pieces about an inch long at the plant and packed similar to the way in which ice cubes are packed now, in cartons or bags.

Preliminary negotiations are now under way with machine manufacturers for the manufacture and sale of this equipment.

Irvington Stove Pipe Club Elects Ice Man President

THE Stove Pipe Club of Irvington, Va., recently decided to formalize its existence by electing a president and W. A. Jones, Sr., operator of an Irvington ice plant was chosen without a dissenting vote. This Club has been in operation for as long as anyone can remember, meeting in Bernard Willing's store which has a huge wood stove around which the members foregather, on stools or crates or even on the counter. Jean Willing, daughter of the owner, serves drinks (soft) or ice cream when the members feel thirsty or hungry.

The president elect's qualifications for his new honors are based on his ability to tell the tallest true story. For instance, he points with pride to the time he rode his motorcycle through the iron fence of the Methodist church yard, and to prove it he can show that one of his toes is missing. He remembers the time he went boating at a camp meeting, caught an anchor in his pocket, fell overboard and nearly drowned. His wife conforms this tale, recalling seeing his straw hat floating on the surface.

Members of the club come from a cross-section (male) of the town's residents, including a radio station manager, a fisherman, a lawyer and a painting contractor.

New Plant Provides Ice For Vegetable Shippers

THE Grants Ice & Development Co., Grants, N. M., headed by Mark Q. Fields has built a $250,000 ice plant to provide ice for local vegetable packers and shippers. The plant was constructed largely from an ice plant in New York City purchased from the City Products Corp., then dismantled and moved to Grants. The company has an authorized capital stock structure of 20,000 shares common stock of par value of 50 cents each. In addition there is an issue of $150,000 first mortgage bonds, and $75,00 second mortgage debenture bonds.

The plant has been operated for most of the 1952 season, manufacturing ice at the rate of 200 tons a day. For next season, some of the shippers plan to build new sheds adjoining the ice plant.

Canadian Ice Advertising

AROUSING drive for December ice sales will be sparked by powerful 2-column advertisements in the Week-End Rotogravure Picture Magazine of December 13, and the Star Weekly Rotogravure of December 20. These two issues will have a combined circulation of 1,858,488 copies — penetrating into every Canadian community.

To cash in on this special December promotion, a two-color folder has been designed, which is a combination Christmas Greeting to customers plus a reprint of the December rotogravure advertisements, and a strong bid for holiday ice business. This folder is designed for distribution by servicemen with their signatures or rubber stamped name, or the words "Your Ice Serviceman" can be left off and the company name imprinted instead.

Iceman Awarded $88,000

DAMAGES of $88,000 have been awarded by a Jury in Circuit Court to Dwight H. Sanders of Centralia, Ill., an employee of the Southern Illinois Ice Company against the Illinois Central Railroad.

Sanders said he fell from the top of a refrigerator car July 18, 1951, when the train of which it was a part backed up suddenly. At the time, he said, he was putting ice into the car. He contended he suffered concussion of the spine, fractures of both feet and heels and that the heel fractures extended into both ankle bones. He said that he developed arthritis in his ankle joints as a result of the injuries.

John C. Casey, attorney for Sanders, claimed the railroad was negligent in not giving Sanders warning that the train was going to be moved.

Korean GI's Make Own Ice

MEDICAL Authorities of the United Nations condemned Korean ice as unfit for human consumption. Therefore, the U. S. Eighth Army and affiliated United Nations forces have been manufacturing their own ice for the hot humid summer months just past. The ice proved to be quite a morale builder, going into messes and hospitals for cooling beverages.

Korean ice is harvested from water frozen on rice paddies during the long cold winter months. For centuries the Koreans have cut and stored this product, selling it in the summer months. Of course it was condemned by the Medical Corps for the lack of purity and the potential communicable disease potential.

"Sno-Gel"

ARTICLES appearing recently in a commerce publication tell of Sno-Gel "a new ice that does not melt." To the reader of the lay publication, this appears to be a new development in the ice refrigeration field. Literature from the manufacturer indicates that the product is produced by mixing a processed powder with water.

Presumably the mix is similar to eutectic solutions, which are not new to the refrigeration industry, but which could hardly be classed as a "non-melting" ice. While providing a medium of heat removal from commodities that it is designed to cool, the product appears, in its commercial form, to lack the correlated actions of ice in freshening and moistening where needed.

The manufacturer describes his product as a gelatinous substance which hold liquid in colloidal suspension. It is packed in plastic containers of various sizes and shapes, then frozen by the user in an ordinary refrigerator or freezer cabinet for small operations, or in a cold storage plant for larger scale activities. A color code is used to designate strength of solution and temperature range at which each formula is used effectively.

When thawing, the product, of course, gives off no gas nor liquid run off, and is presumed that the ingredients are of such a nature that they will not destroy nor contaminate commodities refrigerated in event of damage or accident. Most wide spread use of Sno-Gel is for packaging and shipping perishables on smaller scales than truck or carload. It appears to have an advantage over compressed carbon dioxide, in that it does not have a "burn effect."

Wright Misses Convention

WORD was received at the opening of the National Ice Convention that Wm. D. Wright, secretary of the Illinois Association of Ice Industries would not be there because of a sudden heart attack. Over the years Bill Wright has been a faithful registrant at National Ice Conventions and his presence this year was missed. Late word has been received that his doctor had prescribed complete rest for several days, after which he expected to be up and around again.

Grocers See Iced Poultry and Meat

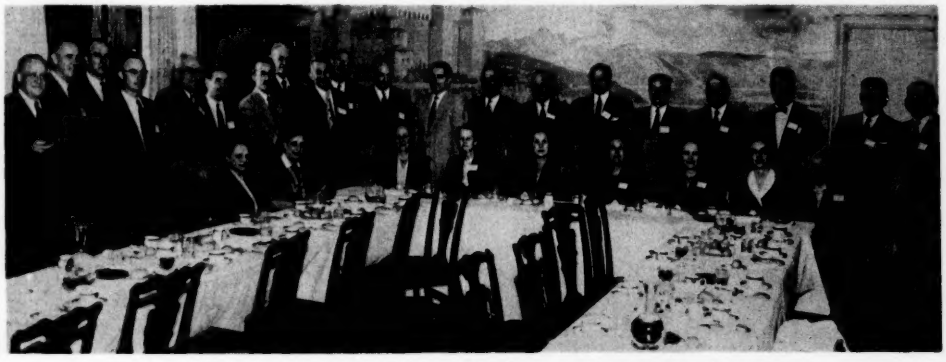
ICED vegetables, iced poultry and Meat on Ice information featured the NAII exhibit at the National Association of Food Chains convention, held in Miami Beach, Fla., October 26-30. As an added attraction, a Skotch Kooler picnic chest was given away. Poultry for the booth was supplied through the cooperation of Armour & Co. Display cases were loaned by the City Products Corp. of Miami.

This iced meat and produce display attracted much interest from food chain operators.

Reports from Unit Ice Associations

Unit Ice Association Secretaries Hold Annual Meeting—Discuss Progress

REPORTS from various segments of the ice industry were heard and association problems were discussed at the annual Fall Meeting of the Unit Ice Association Secretaries held in connection with the Annual Convention of the National Association of Ice Industries, Netherland-Plaza Hotel, Cincinnati, November 11-14. The usual forenoon session was held on the opening day of the convention, followed by a cocktail party and luncheon. Mrs. Muriel Washburn, Chairman of the Florida Association, presided.



Unit Association secretaries and guests in session at National Ice Convention.

Miss Elizabeth Shannon of the Ohio Association, welcomed the group to Ohio, and General P. A. Weatherred of the Southwestern Association responded. Mrs. Edna Vaughan, treasurer, reported a moderate balance on hand.

By acclamation, all officers were re-elected for another year: Mrs. Muriel Washburn, chairman, and Mrs. Edna Vaughan, Delta States, secretary-treasurer.

Meat-on-Ice Story

The meat-on-ice story was brought up to date by Prof. Davis of California. Mr. Davis said that much progress has been made in this new ice market during last year. He recalled a visit made recently to Swift & Co., Chicago. With a Swift representative he called on a number of meat markets which use ice in their mechanical cases. He was told that there are about 100 such markets in Chicago. Also, the chain stores are very much interested.

In California the number of markets using meat-on-ice continue to increase. By experiments and experience, they have learned that the best temperature is to keep it as low as possible without freezing the meat. If the equipment is right and it is installed properly, he said, a temperature of 36 to 40 F. will hold the meat perfectly. One of the biggest obstacles in selling the idea is to convince the market operators who held the idea that ice would cause deterioration of the counter. To counteract this and other objections, a manual has been issued giving full details for application of ice and the results to be obtained.

As further evidence of the interest, the American Meat Institute has recommended it to their members, and Swift, Armour and other big packers are pushing it. In Oakland, Calif., the Union Ice Co., as a result of eight months' work, sold 150 meat markets on using ice in their meat counters and lost 12,—five just quit using it and seven were lost to competitors. In that city 23 percent of the processed ice sales go to meat markets.

New Cubing Machine

The session was interrupted briefly when the secretaries were invited to join the National Association Board of Directors to hear a description of a new ice cubing machine now in process of development. Original patents are held by Thomas B. Gilliam, Western Ice Equipment Co., San Francisco, Calif., and the development work is being done by Gifford-Wood. They are very optimistic regarding its possibilities of savings in labor, thereby cutting costs of production. Full description of this machine will be published when it is ready for marketing, which, it is expected, will be in about nine months.

Poultry Demonstrations

A program of the University of Missouri Extension Service, which ties in with the ice industry was explained by V. A. Esphorst of Missouri. This program put on by the Poultry and Egg Division, consists of a demonstration for growers and dealers, followed by a follow-up demonstration for consumers. It includes information on the value of using ice for dressed poultry and, for the consumers program, why housewives should buy poultry on ice. Some 17 such meetings and demonstrations have been held and they have resulted in much good publicity for ice.

Legal Aspects

Legal aspects of the present national situation were outlined by Wm. T. Jobe, legal consul of the National Association of Ice Industries. He said that conditions now are relatively quiet and in a state of uncertainty regarding the future. The present stabilization program as we now know it probably will be changed or discarded altogether. Price controls will expire automatically April 1, and they probably will not be renewed by Congress.

The National Situation

Guy W. Jacobs, executive secretary of the National Ice Association, reported briefly on association work and the state of the industry. He called special attention to the need for paying serious attention to the question of sanitation and more sanitary ice now being sold to the public.

The Ice Business

Wm. J. Ayers, National president, talking on business conditions in the ice industry, said he saw no reason for the pessimism being shown by some ice men. Any ice man who has been in business any appreciable time, he said, does not expect any spectacular improvement, but he can expect his normal business to continue. After 30 years of being an ice man, he said he had always thought of it as being a good business and most any ice plant operated with skill and energy should be successful. The days of easy profits are gone and the ice plant operator must use marketing and good business management. The know-how developed by research and collection of information, so necessary in these days, can best be performed by the cooperative efforts of the national and state associations, he said.

Advertising and Publicity

The advertising and publicity work of the National Association was presented by John G. Pool Jr. During 1952, he said, consumer advertising had been discontinued but trade magazine advertising had been continued, with advertisements in seven grocery publications, eight serving the beverage and restaurant field, and three, fruits and vegetables.

Publicity in consumer magazine was carried on as usual with a considerable volume of feature stories and news articles. Tie-in with other industries had continued the pace set in previous years with The Four Roses, Beverage associations, Armour & Swift, the Tea Bureau and others. Radio and Television programs had been used with good results. Exhibits had been made and folders distributed at grocery and home economics conventions. All these activities, he said, should be used by the secretaries, by keeping their members constantly posted on them.

General Discussion

The meeting was concluded with informal reports by the secretaries on conditions in their sections, and special problems. This discussion covered levying and collecting of dues, special merchandising and technical conferences, better sanitation in distribution of ice, and exhibits at conventions. In reporting sales, it was suggested that dollar, rather than tonnage volume, would provide a better index.

Gulf Coast Ice Association

A RECORD number of south Alabama and northwest Florida ice manufacturers and their ladies attended the fall meeting of the Gulf Coast Ice Association in Evergreen, Alabama October 30.

A golf match, held prior to the business meeting was the source of much pleasure for many members and associate members. George Yarborough of Pensacola, Fla., won the handsome trophy.

The business meeting was opened by president J. W. Nipper. J. H. Robinson greeted the ice manufacturers and Mrs. Mary Hall, vice-president of the association responded.

Vester Gamble, president of the Florala Ice Company of Florala, Alabama in discussing the value of public relations in any business today, stressed the importance of proper employee training. He urged his listeners to give their customers prompt and courteous service and in closing stated the application of the Golden Rule always pays big dividends.

L. E. Johnson, part-owner of Johnson Brothers Ice & Cold Storage Co. of Marianna, Fla., explained the functions of the Budget and Finance Committee and asked members to give this often thankless, but very necessary part of the organization their full support.

An outline of a short course for ice plant engineers was presented by Miss Muriel Washburn and the group was told that the Florida Ice Association would put on such a course in northwest Florida, if enough interest is manifested to warrant the undertaking.

After discussion the Association voted to indorse the course and guarantee the necessary enrollment. It was agreed to hold the two day meeting in Panama City during the later part of February.

Col. Guy Spearman, owner of the Crystal Ice Co., Pensacola, Fla., gave a factual and enlightening address on merchandising. Speaking from many years of experience the prominent Pensacola business man, told ice manufacturers that their industry still has a wonderful future and there was a good living in the business if—they actively merchandised their product. He strongly endorsed packaged ice; the selling of other commodities from the platform; vendors (when properly placed and serviced) and the over-all importance of friendly and fast service.

Pete Wood, manager of the Kilbourn Ice Company, Panama City, Fla., brought members up to date on research projects under way in the industry.

As the closing and most interesting feature of the meeting, technical questions were answered by a panel composed of Louis Nettleship, A. A. (Dutch) Geiger and Bill Anderson, associate members of the Association. Questions put to the panel concerned actual technical problems encountered by many operators and the general discussion proved those present were vitally interested in this portion of the program.

A barbequed chicken dinner was served by Mr. and Mrs. "Eddie" Sparkman and a cocktail party followed the business session.

Indiana Association Of Ice Industries

COMMENCING early in January, the Indiana Association will again cooperate with Indiana University in an annual training program for ice company personnel. Meetings will follow a schedule similar to the 1952 program. Definite schedules and details will be announced in a later issue.

Much interest is being displayed in our annual fall district meetings, and attendance at these meetings is most gratifying. Topics discussed are general in nature, with emphasis on Merchandising. To date, meetings have been in Vincennes and New Castle. Schedule for the Northern District will be announced at an early date.

James M. Fadely, Hartford Ice and Coal Company, Hartford City, has been appointed to a one year term on the Board of Directors of this association. The appointment is the result of a recent vacancy on the Board.

Our immediate past president, J. R. Jones, has announced the sale of his ice property at Oakland City to Garland Rosenbury of Petersburg, Ind. Mr. Jones has been a loyal and most active member and officer of the Association for many years, and it is with a great deal of regret that we see him leave our circle. Mr. Jones served as immediate past president of the Indiana Association.

The Ice Industry

Illinois Association Of Ice Industries

W. D. WRIGHT, Secy-Treasurer

FALL has come to Illinois and with it an "easing off" in ice sales, the end of the rush and time for reflection, review of the seasons activities and demands and time to make plans for the repairs, rehibilitation and changes in the plant and delivery equipment and the formulation of policies which will govern the administration of business in the immediate future.

Although the past season was exceptionally hot, beginning in June and continuing through September, reports indicate that in spite of the hot weather, total tonnage did not show an expected or corresponding increase. Sales of crushed and processed ice did pick up but the solid, backbone of the industry did not respond.

Where do we go from here? This is the question in the mind of almost every iceman. There is a definite need for a review and re-appraisal of the industry and its problems, new decisions must be made, new plans must be formulated in order to continue successfully in our present economy. Regardless of the results of the election, it is much too optimistic to expect that radical or sudden changes will occur, changes that would provide immediate easing, relief or betterment. After so many years, in building up to our present situation, our many involvements at home and abroad, we can reasonably expect "more of the same" for quite some time.

Due to the drouth the proposed "Hydro-Cooling Project" on peaches in southern Illinois had to be abandoned for this year. The lack of moisture at the right time resulted in under-development as to size and it was the opinion of the growers involved and the John Bean Company who were to furnish the equipment, that the quality of the fruit did not tend to the success of the project. However, the project is not dead and will be kept on the active list for the year 1953.

At a later date, the Illinois Association will hold a Management Conference to review and discuss what was learned at the Annual Convention of the National Association of Ice Industries and make necessary application where possible to local operations. All members will be notified of this meeting.

New England Ice Association

RAYMOND T. WILBER, Secretary

A MEETING of the Board of Directors of the New England Ice Association was held at Boston October 9. Association business was discussed and plans made for future activities.

One of the subjects discussed was membership dues. A committee was appointed to study the present and potential membership and methods used to collect dues and report at the next board meeting. Another meeting will be held sometime in November, following the National Ice Convention. It was suggested that this be a combined general and board meeting and constitute the winter meeting of the association.

About two years ago the association purchased a film "Glistening Beauty" which is particularly adapted for women's meetings. It is a very attractive film and a number of members of the association plan to show it again. The National Ice Association film "Naturally Yours" is also available upon request.

A Board of Directors meeting and a general membership meeting will be held Thursday, December 11, at the Kenmore Hotel, Boston, starting at 10:30 a.m. Every member of the New England ice industry is invited and urged to attend. A group luncheon will be served.

Charles Larsen, chairman of the committee appointed to set up a new dues structure will make his report, and it is expected that action will be taken on this question.

Because of the small New England delegation at the National Convention, one of the members who attended will present a report on the highlights of the national meeting.

Another subject for discussion will be the vending machines operating in New England. Those who have had experience with these vendors will lead the discussion. Connecticut ice distributors have been doing a good job in vegetable icing, both in the field and in the stores, and one of the principal members will discuss this subject. Two other subjects of interest are plant operation and plant conversion for winter activities. These will be made subjects for open discussion.

The meeting of the Directors will follow the luncheon and all association members are invited to attend this meeting. Following this, the program will again be open for general discussion. It is hoped that a good attendance will be present.

Refrigeration Extends Life of Tangerines

EFFORTS to extend the life of tangerines in retail stores are reported successful, following the most recent studies of that fruit by the U. S. Department of Agriculture. The tests, made by specialists in handling, transportation, and storage at the Plant Industry Station, Beltsville, Md., show that the ordinary life of unrefrigerated tangerines in retail stores is about three days; but under refrigeration they will retain an attractive appearance and have good flavor for more than a week.

Four different lots of tangerines shipped from Florida in the usual manner to the Washington, D. C., wholesale produce market were used in the tests, one in December, two in January, and one in February. Some lots that were displayed on non-refrigerated racks were stored in "walk-in" coolers at night, which, the research men say, kept the decay much lower than in those receiving no refrigeration at any time. Tangerines that were well refrigerated both day and night, kept moist by sprinkling with tap water several times daily, or from the melting of "garnish" ice, had a good appearance throughout the testing period. Refrigeration held down decay and wetting reduced drying of the skin.

After eight days of carrying the various lots they were all held overnight at the same temperature and then passed upon by a 10-member "taste panel" that found the well-refrigerated tangerines of "pleasing flavor" and the non-refrigerated "flat."

Ice Carvings Decorate Ice Industry Dinner

TWO eagles carved out of blocks of ice served as decorative pieces for the annual dinner of the National Association of Ice Industries November 13 at the Netherland Plaza Hotel, Cincinnati. John Rodrigues, ice carver at the Netherland Plaza who has a knack of turning out beautiful ice carvings, made these special pieces for the ice dinner.

Missouri-Kansas Joint Convention

THE Missouri Valley Ice Manufacturers' Association and the Kansas Association of Ice Industries will hold a joint convention at the Hotel President, Kansas City, Mo., January 12 and 13, 1953.

Practical Refrigerating Engineer

NATIONAL ASSOCIATION PRACTICAL REFRIGERATING ENGINEERS

NEWS

OPERATING

MAINTENANCE

QUESTIONS -- ANSWERS

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ALVIS CLAY, *Memphis, Tenn.*

First Vice-president
LEO VIVIEN, *New Orleans, La.*

Second Vice-president
REGIS GUBSER, *Los Angeles, Calif.*

Treasurer
LELAND KENAGY, *Newton, Kans.*

Sergeant-at-Arms
W. R. BURNETT, *Los Angeles, Calif.*

Secretary
J. RICHARD KELAHAN

EXECUTIVE OFFICE
435 North Waller Avenue
Chicago 44 • Illinois

THIS MONTH

The Forty-Third Annual Convention of the National Association Practical Refrigerating Engineers was held at the Adolphus Hotel, Dallas, Texas, November 12-14. Fourteen engineering presentations were made by experienced and qualified leaders.

Heat transfer, cooling water consumption and sprinklers in low temperature are discussed in the Question Box.

Los Angeles reports a very successful joint meeting with the Los Angeles Section Refrigeration Service Engineers Society.

NAPRE Annual Convention Reviews Engineering Problems

DALLAS Texans upheld the hospitable traditions of the Lone Star State when they hosted the 43rd annual NAPRE Convention November 12-14, 1952. Delegates knew that they were welcome guests from the time they checked in at the Hotel Adolphus, until they reluctantly bid "Adios" to the Dallas chapter for their homeward trek.

President A. R. Carlson opens the 1952 Convention.

Fourteen informative educational engineering presentations from as many divisions in the industrial refrigeration field were delivered by experienced and qualified leaders in each field. A refrigeration information bureau held sessions for the benefit of delegates and guests with perplexing problems.

Coupled with the educational program was a relaxing and interesting social program for all hands: A style show, luncheon and motion picture preview for the ladies; a luncheon, stag show and chicken dinner for the men. Unique in the social and educational program was a joint field trip for the men and ladies to the world's largest cold storage warehouse, followed by a cocktail party, and then the traditional dinner dance back at the hotel.

The memory of the late Emerson Brandt, for 18 years Secretary of NAPRE, and other deceased brothers was observed appropriately. Retiring President "Rudy" Carlson was hon-

NAPRE Officers, 1953

President, Alvis J. Clay, Dept. of Public Service, Memphis, Tenn.

First Vice-President, Leo J. Vivien, Engineers Examining Board, New Orleans, La.

Second Vice-President, Regis Gubser, California Consumers Corp., Los Angeles, Calif.

Secretary, J. Richard Kelahan, 435 N. Waller Ave., Chicago 44, Ill.

Treasurer, Leland Kenagy, Newton Ice Company, Newton, Kansas.

Sergeant - at - Arms, W. R. Burnett, Royden Ice Co., Los Angeles, Calif.

Board of Directors

LeRoy Etzel, Chairman, Pacific Fruit Express Co., San Francisco, Calif.; Bert McKenna, Central Cold Storage Co., Chicago, Ill.; Elliott Hallowell, Snell Refrigerating Co., Dallas, Texas; Hubert B. Branham, Pacific Fruit Express Co., Pocatello, Idaho; Frank L. Chase, New Orleans, La.; R. A. O'Neill, Central Power & Light Co., Corpus Christi, Texas.

Board of Advisors

A. R. Carlson, Chairman, Railways Ice & Service Co., Chicago, Ill.

Educational Committee

H. G. Venemann, Chairman, Purdue University, West Lafayette, Ind.

New officers elected at the 43rd Annual Convention of NAPRE: Sitting: A. R. Carlson, Jr., past president and chairman of the board of advisors; Leland Kenagy, treasurer; Professor H. G. Venemann, chairman, educational committee; Alvis J. Clay, president; Leo J. Vivien, first vice-president; Regis Gubser, second vice-president. Standing: J. R. Kelahan, secretary; Frank Chase and Elliott Hallowell, directors; Leroy Eetzel, chairman, board of directors; Bert McKenna, R. A. O'Neill, Hubert Branham, directors. Absent: Ray Burnett, Sergeant-at-Arms.

ored for unusual and extraordinary service, and Alvis J. Clay was elected unanimously president for the 1952-1953 terms. It was an all around enjoyable activity packed three day meeting, a credit to the National executives, the National Committees, and the Dallas Chapter most of all.

First Session

President A. R. Carlson opened the first session promptly on Wednesday morning. He introduced Tom Weatherford, president of the Dallas Chapter and chief engineer of Alford's Refrigerated Warehouses. Mr. Weatherford introduced Obert K. Irvine of Southland Corporation, Chairman of the convention welcoming committee, who presented Mayor J. B. Adoue of Dallas.

Mayor Adoue welcomed NAPRE to Dallas with a few words of recollection to his first working days as an ice man, and later as an engineer in Texas ice plants. He commented that there was no NAPRE in those days to help a young man get ahead, which was perhaps one of the reasons for his turning to other endeavors. NAPRE, like the city of Dallas, has come a long way according to the Mayor. They have come of age, so to speak. Therefore, he concluded that he expected rather great things to come of the NAPRE meeting in their city. He invited all to enjoy themselves while in the city of Dallas.

Walter Bernd Responds

Response to the "Welcome to Dallas" was by Past President Walter Bernd, a privilege long accorded this member from Washington, D. C. In his very professional manner of speaking, Mr. Bernd thanked the civic officials and the Dallas Chapter for their cordial invitation and their most enthusiastic welcome.

The speaker took considerable pride in the fact that he was born in Dallas and that his late father, J. R. Bernd, was well acquainted with the founders of NAPRE. Texans, not only from Dallas, but from Tyler, Fort Worth, Lufkin, Houston, Temple, San Antonio, Texas City, Ballinger, Hamlin, Henderson, Waco, Paris, and Nacogdoches were in the forefront when NAPRE was born, both at the provisional meeting in Texarkana and a year later in Shreveport, the first official convention city.

Mr. Bernd also recalled that in Dallas, the fire house, "hoosegow," Post Office and civic buildings of his boyhood days, all of one story frame construction, stood on the very ground now occupied by the 25 story Adolphus Hotel in which NAPRE delegates were then convening. He agreed with Mayor Adoue that NAPRE and Dallas had grown terrifically, one in 43, the other in 53 years respectively.

President Carlson then read congratulatory messages from H. T. McDermott, Publisher, ICE AND REFRIGERATION, the official organ of NAPRE, from J. K. Hyatt, Chief Engineer, Anheuser-Busch, Inc.; Past President John R. Hawkins, Corps of Engineers, U.S.A., San Francisco; from William Dalton, Executive Vice-President, N. A. R. W.; Mr. and Mrs. James A. Spalding; Past President Eric Utescher, Supervising Engineer of Kirby Hotels, and others.

Mayor J. B. Adoue of Dallas making the welcoming address to convention at the Adolphus Hotel.

President Reports

Mr. Carlson then made his report as president. He summed up the year's activities from the Memphis Convention to Dallas. He touched on the passing of Emerson Brandt, pinch-hitting of Miss Ellen Sparling and Promessor H. G. Venemann. He mentioned the Professor's successful piloting once again of the Educational Committee and of Howard Peterson's successful leadership of the Membership Committee.

President Carlson acknowledged the helpful assistance of Regis Gubser, Chairman of the Board; Leland Kenagy, Treasurer; Alvis J. Clay and Leo J. Vivien, Vice-Presidents, and other members of the board. He commented on the increase of membership from 1407 to 1474, an increase in the number of advertisers in the Operating Data Book from 127 to 140 and an increase of revenue for the same booklet of almost $1400.

The presiding officer then introduced the new Secretary, J. Richard Kelahan, for a report. Mr. Kelahan stated that he could claim no unusual or outstanding achievements in his first two and one-half months of work. He looked forward to a busy and successful New Year for NAPRE and concluded with acknowledgements of assistance and guidance from the National Headquarters staff, the Officers and the Board, as well as many of

A view of one of the sessions during reports of Committees.

the past presidents and his own Chapter at San Francisco. Mr. Carlson then introduced Leland Kenagy, Treasurer, who gave the financial statement as prepared by the Association auditor.

For standing committee reports, the President then introduced Professor H. G. Venemann, Educational Committee Chairman. The Professor commented from the floor that seven sections of the Guy King refrigeration course has been issued by National Headquarters, the usual run of questions and answers had been prepared for ICE AND REFRIGERATION, the educational program for the convention had been arranged under the guidance of the President, and the Operating Data Book prepared, edited and circulated. The chairman of the membership committee, Junior Past President Howard Peterson, who had been delayed in his arrival, then requested permission to postpone his report until the Thursday A.M. session.

None of the Operating Data Book committee were on hand; therefore, Mr. Carlson augmented his earlier comments on the Data Book by pointing out the new Buyer's Guide feature in the back of this 12th edition. He encouraged all members in a position to make purchases to use the Guide and to inform their suppliers of this service. The President then appointed the following functional committees:

Committees

Credentials Committee: Walter E. Bernd, Hubert Branham, J. W. Sullivan, John J. Bryner.

Auditing Committee: Emmett T. Quinn, John F. Daly, Louis C. Roesel, W. Ray Burnett, appointed as the Auditing Committee.

Resolutions Committee: R. A. O'Neill, C. C. Lovejoy, Charles A. Conley, Professor Harold P. Hayes.

The President then named the members of the Nominating Committee which he had appointed in May as per the by-laws of the Association: Howard H. Peterson, Emmet T. Quinn, George K. Koehne, the three Junior Past Presidents, and Past Presidents A. M. Casberg and George Whitman.

All committees were instructed to return reports at the opening session on Friday afternoon. At this time President Carlson deviated from the regular order of business in a tribute to Emerson Brandt, late Secretary of NAPRE.

Eulogy

Angus M. Casberg, past president, NAPRE, a close friend of Mr. Brandt's for many years delivered the eulogy. Mr. Casberg said he found the privilege of memorializing this outstanding officer difficult to prepare, but rewarding to deliver before the Convention: "Mere words are futile . . . to express the emotions and inner feelings of our regard for him, which will linger in our hearts as long as we may live," he said.

Mr. Casberg vividly described the qualities of the patient husband, the companionable and loving father that were Mr. Brandt's. It was a well known fact, he related, that the late Secretary had sacrificed an outstanding engineering career to devote himself fully to the problems of NAPRE. Without his guidance and hard work in our behalf, there would be no NAPRE, according to the eulogist.

An author of note, an engineer of world-wide reputation, an active citizen of his community, and a leader in his church, Emerson was always the humble and cooperative associate. Although NAPRE is a non-sectarian group where neither religion nor politics come into prominence, the late Secretary demonstrated his faith and Christian ideals by the life he lived. In closing, Mr. Casberg asked God's blessing and comfort on the departed Secretary's loved ones, and urged that all the delegates rededicate themselves to furthering the aims and ideas of NAPRE, for which Emerson Brandt had lived so much in so short a lifetime.

Following the special order of business, the President introduced F. B. Riek, Jr., Secretary of the Dallas Chapter, who made the announcements of the day. The assembly then recessed for lunch.

Luncheon and Fashion Show Wednesday

At noon Wednesday the convention limelight was stolen by the ladies of the delegates. A luncheon and fashion show were held in the Mural Room of the Baker Hotel, by the world famous Nieman-Marcus Department Store, for the exclusive benefit of the convention delegates' feminine companions.

Mrs. Kitty Walker of Nieman-Marcus Department Store was the hostess. The latest styles in sports attire, business suits, evening clothes and fall and winter coats were shown. There was also a special showing of men's ties and sport shirts by Adrian's special representative.

Engineering Session

The Wednesday afternoon sessions were presided over by First Vice-President Alvis J. Clay. First introduction was that of Professor H. G. Venemann, Chairman of NAPRE Educational Committee. The Professor was accorded the responsibility of handling the introduction of the first speaker, inasmuch as he had been a former student of Professor Venemann's. Mr. Hallowell was introduced as the Chief Engineer of Snell Refrigeration Supply, Dallas, Texas, and as the designer of Alford's Refrigerated Warehouses, "the world's largest cold storage warehouses," also at Dallas.

It might have been mere coincidence that the Professor's protege lives on Purdue Street in Dallas, but the delegates surmised that it was intentional since Mr. Hallowell not only had spent a few years at Purdue University, acquiring three degrees, but he had also seen the first of this world in Lafayette, Ind., the home of the Purdue boilermakers.

Professor Venemann commented on some of Mr. Hallowell's designs in cold storage construction as being unorthodox and non-conventional, but he reckoned that his student was capable of acting and carrying on quite successfully in his chosen field.

In his talk, Mr. Hallowell pictured

The speakers table for the annual banquet, 43rd Annual NAPRE Meeting. L. to R.: Leo J. Vivien, 1st vice-president; Mrs. Vivien; Mrs. A. R. Carlson; Jr. Past President Carlson; Mrs. Tom Weatherford; President Alvis J. Clay; Tom Weatherford, president of the Dallas Chapter; Howard H. Peterson, past president; Mrs. F. B. Riek, Jr., and F. B. Riek, Jr., Sec'y of Dallas Chapter.

for the operating engineer the likelihood of the operator being presented with three or four proposals for an air conditioning plant by his employer. It would not be unlikely, the speaker pointed out, for management to ask the advice or assistance of the operator in selection of an air conditioning system. Therefore, if the chief engineer had not given any consideration to this field, he would be on the spot. Mr. Hallowell's paper dealt with the various types of air conditioning systems and their specific applications. His presentation was in the nature of a guide for the operator to brief himself on this particular field, plus a few suggestions on how to select an adequate system.

Blower Coil Design

The next speaker was introduced by the chairman of the session. Dan D. Wile, Chief Engineer for Refrigeration Engineering, Inc. of Los Angeles delivered a talk on "Blower Coil Design and Selection for Proper Humidity Control." The speaker was introduced as having twice won the ASRE Wolverine award for outstanding publications, being the only individual who has received that award twice. It was noted from the introduction that Mr. Wile has had broad experience in both the practical and theoretical phases of refrigeration and air conditioning. Mr. Wile's concluclusion to his paper was that in a practical sense, high humidities are obtained in refrigerated storage and freezing spaces by providing ample surface area.

Coil Ratings

The third speaker of the afternoon was Mr. F. Edward Ince of the Marlo Coil Company in St. Louis. Mr. Ince is a research engineer with duties of sales application for his company. By means of slides, illustrations and photographs, he demonstrated the testing and rating of forced air circulation type coils for refrigeration. He concluded with the statement "on behalf of the manufacturers who conscientiously try to furnish coil ratings that may be used in field application, the plea for all is that extreme care be exercised by the engineer to match load requirements, both latent and sensible, and within the catalogued rating of coils."

Bureau of Information

The afternoon session was recessed and at 7:00 o'clock the Bureau of Refrigeration Information convened. Leo J. Vivien, second vice-president, acted as moderator for the panel which consisted of Professor Venemann, Alvis J. Clay, Professor Harold P. Hayes, Bert C. McKenna, Elliott Hallowell and Regis Gubser. A considerable number of questions were submitted, both in writing in advance and from the floor. The panel members dealt with the questions very satisfactorily and at times were assisted by delegates from the floor. At the conclusion of the session, the ladies joined in the Annual get-together.

Third Session

The convention reconvened on Thursday morning with Bert C. McKenna, director, presiding. Mr. McKenna introduced the first speaker of the day, Joseph Cross, of Mojonnier Brothers Company, Inc., of Chicago. The chairman related that Mr. Cross was a graduate of Ohio State University and had been an engineer for the Mojonnier firm since graduation from the university. Mr. Cross, he said, held approximately 20 patents on refrigeration and heat transfer equipment. His topic was "Refrigeration As Applied to the Concentration of Foods."

"As practical refrigerating engineers, you will no doubt be chiefly interested in the vital part which refrigeration and refrigeration principles play in the processing of concentrated food products," was the opening statement of Mr. Cross' talk. The speaker chose orange juice and milk as the two products for his discussion. He explained that refrigeration systems are essentially heat pumps.

It is called a refrigeration system only because the refrigeration effect of the system is useful. A heating engineer can, according to Mr. Cross, with equal logic, call this refrigeration cycle a heating system if he draws heat from a low level source, raises its temperature by compression, and uses this heat at a higher level of temperature. The Lo-Temp Evaporator which was developed originally for concentrated orange juice, uses both sides of a heat pump cycle. The high side according to the speaker supplies heat for evaporation, and the low side supplies refrigeration needed to condense the product vapor produced by the high side.

Mr. Cross explained by means of illustrations and slides, the mechanical devices making up the systems for concentrating orange juice for freezing, showing originals and latest developments in this field. He went on to the discussion of dry milk processing, showing old and new equipment and processes used. In each case he showed the delegates how the demand for the product started on a small scale and has grown to wide proportions.

Membership Contest

After Mr. Cross' talk, session chairman, Bert McKenna, interrupted the regular order and called for a report from the membership chairman. Howard Peterson, chairman, reported that the contest had been hectic, results were close and his pleasure in announcing the re-

A portion of the banquet room at the Annual Dinner Dance.

sult was very great. He announced that Louisiana Chapter No. 2 at New Orleans was the winner of the point contest, the contest based on the most new members, plus a bonus for the most renewals. Tulsa Chapter won the small chapter membership contest, based also on the point system but having an added feature of a formulated handicap which enables small chapters to compete equitably with the larger ones.

Los Angeles Second Place

Los Angeles took second place on points, and New Orleans second place in the percentage contest. On the basis of their winning top honors in the point contest and second place in percentage, Mr. Peterson said that the membership committee would recommend to the Board of Directors that New Orleans be awarded the Emerson Brandt Memorial Membership Trophy. Third place in the point and percentage contest was won by Tennessee Chapter No. 1 at Memphis. Fourth place on points went to Dallas and the same position in the percentage contest went to Fort Worth.

Freezing Facilities In Food Plants

The second speaker was Regis Gubser, chief engineer for California Consumers Corporation, and Chairman, Board of Directors, NAPRE. Mr. McKenna stated in the way of introduction, that Mr. Gubser was a graduate of California School of Technology. He had been a member of NAPRE since 1932 and had delivered papers before at NAPRE conventions on several occasions, many of which had been reproduced in ICE AND REFRIGERATION and in the Operating Data Book.

"Factors Controlling the Choice of Freezing Facilities in Food Plants," was the subject of Mr. Gubser's talk. The speaker approached his subject from an economic and management angle as well as the practical engineer's viewpoint. He described some experiences of his firm in expansion and conversion of their food freezing facilities.

Mr. Gubser stated that the following factors control the choice of food freezing facilities: The product or types of products to be frozen, the amount of product to be frozen per unit of time, how the material is to be handled, freezer location, and type of operating personnel. Mr. Gubser wound up his discussion by presenting all attendants at this session with a "Guide Sheet" to help them in the selection of food freezing facilities. The chart was discussed in a question and answer session following the presentation.

Evaporator Coil Design

Final speaker at this session was John F. Daly, Manager of the Ice Plants for the Santa Fe Railway Company. President Carlson introduced this speaker, explaining that he had known Mr. Daly for many years and thought that this was an excellent opportunity to settle some old scores. Mr. Carlson then surprised all present by talking very favorably of the speaker.

"Evaporator Coil Design" was Mr. Daly's topic. He opened by pointing out that we were all aware of the major industrial growth that freezing of foods had reached. He pointed out that to accomplish freezing in a short time requires new conceptions in system designs. While not so spectacular in growth the need for precooling and storage of non-frozen products has demanded increasing ingenuity on the part of the practical engineer. His talk covered one phase of this development, the design of coils having a high rate of heat pickup, with handling of air in quantities necessary to promote rapid product cooling, quick freezing, or adequate storage conditions.

Mr. Daly augmented his talk with slides, made some very practical suggestions on pipe coil design and finished by listing nine principle requirements for obtaining a good pipe coil operation.

After Mr. Daly's talk, the session chairman, Bert McKenna, recessed the assembly and all delegates moved from the Danish Room on the 15th floor to the Cactus Room on the 21st floor for a business luncheon.

Luncheon Meeting

President Carlson presided at the luncheon meeting. Two topics were on the agenda. First was a discussion of membership drives and the successful methods used by the leading chapters. Second topic was on chapter programs with particular emphasis an annual planning.

Leo Vivien, whose chapter at New Orleans had won the membership contest, said that their membership committee sells the association and doesn't force anyone to join. By selling the organization, he said, they meant the educational program. He also related that their next emphasis was placed on maintaining membership. After a man is initiated, they encourage him for three years. After that time he'll do all the encouraging according to Vivien. He also commented on the fact that they did not concentrate their efforts in the ice or the cold storage industry alone, but went after the operators of large air conditioning, dairy, packers and miscellaneous refrigeration plants.

Ray Burnett, chairman of the Los Angeles membership committee, related his experiences in using prizes and competitive teams for recruiting new members. Past President E. T. Quinn took the floor to tell of his experiences in chapter programming. He said they didn't believe in making it all education at every meeting. They limit it to one hour, take a break and then listen to a lecture that is oftentimes tied to the educational subject of earlier in the evening. When attendance drops, they get right after it. They recess for the summer months, holding an old-timers night before the recess and re-open with a "ham and beans" dinner in the Fall of the year.

Board Chairman Regis Gubser added to the chapter program comments by advising all chapters to plan their programs way ahead of time. The educational program should be sprinkled with entertainment. The program should be integrated. The calendar should be based on education and some entertainment, augmenting the education with topic speakers tied to the educational program. He further advised that the meetings start on time and end on time, never running over two hours. Plan your work and then work your plan, was Mr. Gubser's advice.

George Koehne, past president, added to the topics on the agenda by commenting on the operating data book. He encouraged all members to read their data books and to use the list of advertisers in the data book for their purchasing. He pointed out that the operating data book was the heart of the finance of the association and made suggestions as to how to obtain advertising. His comments were supplemented by remarks of a past president, Mr. Walter Bernd.

Fourth Session

The Thursday afternoon session was under the chairmanship of O. K. Irvine of Dallas. Mr. Irvine introduced Howard Peterson, Jr. Past President, for his presentation of "Modern Cold Storage Plant Design." Member Peterson had not only been active in NAPRE, but other refrigeration and air conditioning societies as well, holding positions of prominence in all, according to Mr. Irvine. He related that the speaker was also a fraternal man, civic leader, professional engineer and author of quite a few technical papers on the refrigeration industry.

Convention News Oddities

SIXTEEN of the delegates were members-at-large, not affiliated with any chapter. There were 150 delegate votes, 16 for members-at-large and 134 from the chapters after all proxys were counted.

The chapter with the largest number of delegates present at the convention was New Orleans, with 15 of their actual 29 on hand. Los Angeles was the chapter with the largest number of delegates certified, with a total of 33. The largest number of delegates present from any one company numbered 9 delegates from the Pacific Fruit Express Company. Alford Refrigerated Warehouse of Dallas had the largest number of delegates registered for any single plant, with a total of 6.

LOS ANGELES and Chicago chapters both claimed W. V. (Bill) Richards. Bill was initiated and brought into NAPRE by Los Angeles chapter. However, he moved to Chicago for the H. A. Phillips Company, which firm sent him to the convention with Herb Rosen, their design engineer.

L. I. DENTON of Oakland, California, retired from the Pacific Fruit Express Company, makes a special effort every year to attend the convention. He traveled with the San Francisco delegation and didn't miss a single Dallas event.

THE New Orleans delegation came to the convention, via motorcade. It took them three very full days to make a distance of 480 miles. Delegates from other groups cannot understand what took the New Orleans group so long, since they seemed to be so fast in other activities like rounding up new members and renewing old memberships. Apparently this delegation enjoyed themselves quite well along the way for they appeared to be too tired to join in the pre-convention festivities on Tuesday night.

HOSPITALITY House was held in Room 2003 of the Adolphus Hotel for delegates and their ladies by Pete Bancook, owner of the Bancook Maintenance Company, Dallas, Texas, member of the Dallas Chapter, and Mrs. Bancook. The attendants enjoyed the hospitality very much, taking advantage of every opportunity to visit with the Bancooks.

However, many of the delegates and their ladies were quite surprised, to say nothing of the consternation of one hotel guest, when the last convention session broke up earlier than anticipated, and out of force of habit most everyone went to room 2003. Pete and his wife had checked out at noon in order to prepare for some of the evening festivities. The Adolphus had placed a new guest in the room and he was very upset at the number of callers he had who wanted to make themselves right at home.

DALLAS has had an extreme water shortage this year and all hotel guests were asked to conserve as much as possible on their water requirements. At the "Annual Get-Together," Leo Vivien took the microphone for a few words. He implied that the gathering was one of a very practical group of engineers, who would not be offended at a suggestion he had to make to the Dallas Texans present. According to Leo, he had heard great stories of the prowess and feats of the Texans and he couldn't understand why they hadn't solved their water problem. He suggested that they build a six inch pipe line from Dallas to the Gulf of Mexico, which shouldn't take too long, considering how fast and how well the Texans work. He concluded that pumps would not be necessary if the Dallas group would get together on their end of the pipe line and by combined individual efforts draw a vacuum on the line. He concluded with "If you Texans can suck as hard as you can blow, it won't be long before you'll have the whole Gulf of Mexico here in Dallas!"

THE delegate who traveled the greatest distance to attend the convention was Harry D. Jefferson. He and Mrs. Jefferson came all the way from Honolulu, Hawaii, their first trip to the United States in 20 years. Mr. Jefferson is employed by the Hawaiian Pineapple Company, Ltd., as their chief electrical engineer, refrigeration engineer and instrumentation engineer. He has been a member of NAPRE since 1935. Mr. and Mrs. Jefferson continued to New Orleans after the convention for a vacation, after which time he will go to Syracuse, New York, before returning to the Islands.

FLORAL decorations at the convention were furnished through the courtesy of Mrs. Alice Voss Gerstmayer, owner of the J. H. H. Voss Co., Inc. Mrs. Gerstmayer has always treated the convention delegates and their ladies to floral settings for NAPRE conventions.

PRESIDENT A. R. Carlson impressed upon each session Chairman the importance of taking a break — a smoke and a stretch, between each paper delivered. Our Past President's philosophy on this matter was, "The mind can only absorb as much as the Seat can endure."

The Junior Past President opened his talk by pointing out the diversity of opinion as to what constitutes good cold storage building and equipment design. He felt it best to limit his talk to the construction of buildings where palletized operations were necessary.

Paramount consideration, the speaker pointed out, is selection of a site. Plants of all types and from all sections of the U. S. came into the discussion. Pictures of plants in various stages of construction and even in completed operational status were shown. Insulation and machinery systems were touched on briefly. The speaker summed up eight items that bothered warehousemen most, and concluded that expansion and modernization does not bother management nearly as much as increased cost of operation. Therefore, he expects more and more modernization where such expansion will evenutally lower high operating costs.

The second speaker of the afternoon was Professor Harold P. Hayes, Dean of Engineering, California State Polytechnic College, San Lius Obispo. Professor Hayes, a member of NAPRE, was introduced by Chairman Irvine as a graduate of the University of Santa Clara and former Head of the Mechanical Engineering Department of his Alma Mater. According to Mr. Irvine, Professor Hayes is an author of several papers on the industry and formerly instructor for the San Jose Chapter, NAPRE, 1949-52.

Professor Hayes introduced his associate in the preparation of the paper, J. W. Sullivan, chief engineer of Modern Ice and Cold Storage Company, San Jose, California. Mr. Sullivan, also a NAPRE member, has been a chief engineer since 1925 and chief engineer of Modern's plant since 1946, according to the speaker.

Maintenance and Operation In Cold Storage Plants

Professor Hayes spoke on "Good Maintenance and Operating Procedures in Cold Storage Plants," using the system at Modern Ice and Cold Storage Company as an example. He described the plant and storage facilities and its operation. Slides in color of the plant were shown. The professor explained the use of a machinery index and a machinery history. A simple but effective maintenance and overhaul calendar suited to operating practices and procedures of the company help keep this firm from lost processing time and from product loss through machinery derangement.

Mr. Sullivan took over the question and answer session following the Professor's presentation. Emphasis was on a lubricating oil reclaiming and re-refining device used by Mr. Sullivan at his plant. He explained that the device was approved by his oil supplier and his machinery had not suffered in over five years of operation on this program. The afternoon sessions were then recessed for a field trip.

Field Trip to Alford Warehouses

Unique in field trips, the visit to Alford's Refrigerated Warehouses included ladies, the first time in NAPRE history that the ladies have accompanied the delegates on an inspection trip. Fred Alford met all visitors in the auditorium of his plant and introduced his management and engineering staff to the group. Elliott R. Hallowell, the design engineer for this plant, narrated a few statistics concerning the plant and its design.

The guests were then divided into three sections and toured the plant via a conventional fairground sightseeing train. The tour included a quick dash into a sharp-freezer, viewing of frozen foods in a sub-zero storage room, inspection of the largest known single high temperature refrigerated storage room and a ride through the chain of dry storage warehouses. Half way through the trip, all hands took a walk through the machinery room. Many engineers returned to this scene later for a more leisurely visit. Delegates and their ladies expressed appreciation to Mr. Alford and his staff for the very fine visit and returned in their chartered busses to the Adolphus Hotel for the evening festivities.

Dinner Dance

The social highlight of the convention was the annual dinner dance presided over by Tom Weatherford, president of the Dallas Chapter. An overflow crowd caught the management a bit off-guard, but extra tables were set up promptly and all those present enjoyed a prime rib roast of beef dinner for which the Texas hosts took many bows.

First Vice-President Alvis J. Clay, was asked to be toastmaster. Mr. Clay introduced Howard Peterson, Junior Past President, who presented a Past President's plaque to A. R. Carlson. Mr. Carlson thanked the Board and members for the handsome gift and assured all that it would hold a place of prominence in his office.

Mr. Clay then called on Director Bert McKenna who recalled President Carlson to the rostrum and told of the unusual burden placed on the president this year. He noted that President Carlson had carried on, at times even jeopardizing his own position and straining home ties, all for NAPRE's benefit. Completing this story about an ice man, Mr. McKenna presented the retiring President with an 8 millimeter Kodak motion picture camera, case and two magazine films. President Carlson was caught without words and could only stammer his thanks. Mr. McKenna topped the ceremonies by shooting a re-presentation of the President's plaque on the motion picture film for the retiring President.

Toastmaster Clay then called Past President A. M. Casberg. Mr. Casberg escorted Miss Ellen Sparling, the Assistant Secretary of NAPRE, to the rostrum. The Past President related how Miss Sparling had completed 25 years of service with NAPRE in May of this year. Her loyalty and devotion to the Association through some very troublesome, and tiresome years, too, was rewarded in a small part by presentation of a "Century" Gift Note. Miss Sparling thanked the members and delegates briefly and as she retired, Mr. Casberg proclaimed her "Queen of NAPRE."

Following these presentations, the delegates, their ladies and visitors enjoyed an evening of dancing to the music of Rip Giersdorf and his Dallas TV orchestra.

Fifth Session

Regis Gubser, chairman, Board of Directors, served as session chairman for the Friday morning opening. He introduced C. O. Buttrill with Magnolia Petroleum Company. A native of Texas, Mr. Buttrill, graduated from Texas A. & M. Chemical Engineering School according to Mr. Gubser. The speaker started with Magnolia as a chemical engineer and is now Assistant Process Superintendent. The chairman related that Mr. Buttrill was the author of the article "Engineer Training Methods" which appeared in the magazine Petroleum Refiner.

Refrigeration in Modern Refinery Processes

"Refrigeration Serves Refineries and Refineries Serve Refrigeration," dealt with refrigeration principles

and practices in modern refinery processes. Products of those processes, in turn, the speaker related, serve the refrigeration industry. Most prominent are the refrigeration lubricating oils and, more and more, the use of hydrocarbon gases as refrigerants. He concluded with the observation that among refinery people the trend of thinking is toward using refrigeration as a utility.

Refrigeration on Rails

The second speaker for this session was Leroy Etzel. Chairman Gubser observed that Mr. Etzel was the Refrigeration Superintendent for Pacific Fruit Express Company and had been a member of NAPRE since 1921. He was a past president of the Sacramento chapter and now active with the San Francisco group. At present he is a National Director. He has served as chief engineer of the Roseville, Omaha and Pocatello plants of P.F.E.

Mr. Etzel's paper, entitled "Refrigeration on the Rails", in part dealt with early phases of refrigerator car construction. He included statistics for approximately 60 years of refrigerated railroading which were quite startling to his audience. The speaker touched on three types of car service, the tariffs and routines followed. He described modern car icing and concluded with the comment that his company, a leader in this field, would finish this year with a consumption of nearly 2,500,000 tons of ice.

Modern Brewing Practices

The final speaker for the morning was introduced by Professor H. G. Venemann, an old friend. The professor cited present business positions that the next speaker held, his position in the community and his achievements in his chosen field. For a gentleman of such stature, the professor pointed out, one wouldn't expect that his education and experience was self acquired. His career should be inspirational, the professor related, to members of NAPRE, who for the most part had not had the opportunity either for a more formal education. This was the introduction of George B. Bright of Detroit.

Mr. Bright's discussion centered around "Modern Brewing Practices." He did not limit his discussion to refrigeration entirely, but brought in interesting items of power, instrumentation, and brewing processes and procedures. His presentation dealt with three eras of brewing; prior to, during, and after prohibition. The speaker used 18 illustrations, actual photos of alterations and remodelling of a Detroit brewery, to emphasize his remarks. The convention then recessed for lunch after this talk, and delegates were overheard discussing the thirst they all raised during the last speaker's remarks.

Sixth Session

The convention session in the afternoon was again conducted by the president. Mr. Carlson introduced L. P. Reiss of Dallas, a member of the local chapter. The president said that Mr. Reiss was a graduate of "the school of hard knocks" and after almost two score of years in utility ice plant operations he had become a consulting engineer in Dallas. Mr. Reiss displayed quite a few sketches and charts that he had originated and lectured from them on "Changes to Ice Plant Evaporators Which Brought About Greater Capacities."

Automatic Operation

The next speaker was unavoidably absent but had forwarded his paper and illustrations. Mr. Carlson introduced Mr. R. A. O'Neill of Corpus Christi, Texas, a member, who delivered the paper for Eugene Rytlewski. According to president Carlson, Mr. O'Neill was of the same "school of hard knocks" as Mr. Reiss, who had preceded him on the rostrum. A registered professional engineer, an active member and past president of the Southwestern Ice Manufacturers Association, Mr. O'Neill is now supervising engineer of 38 ice plants for Central Power and Light Company. Mr. Carlson related that Mr. O'Neill was well qualified to deliver Mr. Rytlewski's paper, entitled "Revamping Ice Plants to Automatic Operation."

Mr. O'Neill opened his remarks by pointing out to the listeners that the originator of the paper was a director of NAPRE, and very active in the Chicago chapter. Eugene Rytlewski had started work in the refrigeration field under Mr. John Westerlin, a well known authority on ice plant engineering. Director Rytlewski is still employed by the firm of Westerlin and Campbell as their engineer. Mr. O'Neill further remarked that Mr. Rytlewski was an author of a group of papers on plant operations of which several had been published in ICE AND REFRIGERATION and the Operating Data Book.

Mr. Rytlewski's paper, as given by Mr. O'Neill, indicated that most requests for conversion of ice plants to automatic operation came not as a question of cutting operating costs but rather as a request for help in making it easier for the management to hold good operating engineers, who are at a premium today. The paper showed where and how to apply automatic controls, and why. The author's remarks included the ice storage room system as well as ice making. Photos of several installations were shown and explained.

The Operating Engineer

Last, but not least, speaker of the program was Professor H. G. Venemann, educational committee chairman. The secretary had been scheduled to present the professor but had been called away from the session of business, so president Carlson introduced the speaker, crediting him for immeasurable assistance and arrangement of the entire program of the convention.

According to Professor Venemann, his paper, "The Stuff that makes an Operating Engineer" was intended to be a clear cut picture of the personality, experience and educational background needed to become an outstanding operating engineer. Delegates agreed the professor's talk did just that, and was inspirational, showing a worthwhileness of progressive study and the will to succeed.

Final Session

At the conclusion of the professor's presentation, the president opened the final session. Walter E. Bernd, Chairman, Credentials Committee, reported a total of 134 delegate votes, plus 16 membership-at-large votes, representing 11 states, District of Columbia and Hawaii. E. T. Quinn, Chairman of the Auditing Committee, reported that the audit of the treasurer's report by Glenn Jackson, public accountant, had been checked and approved by the committee. Further, the secretary and treasurer are currently covered by fidelity bonds as required by the constitution.

Howard H. Peterson, chairman of the nominating committee, presented the following slate of officers for consideration by the delegates: President, Alvis Clay; 1st Vice-president, Leo Vivien; 2nd Vice-president, Regis Gubser; Treasurer, Leland Kenagy; Sergeant-at-arms, Ray Burnett; Chairman of the Board, Leroy Etzel; Board members, Bert McKenna, Elliott Hallowell, Hubert Branham, Frank Chase and R. A. O'Neill, and

Chairman, Educational Committee, H. G. Venemann. J. Richard Kelehan was appointed Secretary by the Board of Directors.

The resolutions committee report was made by chairman R. A. O'Neill, as follows:

Resolutions

This, the Forty-Third Annual Convention will stand on record as one of the outstanding in the history of our Association. To Dallas Chapter, its President, Tom Weatherford, Jr., his co-Chairmen, D. F. Bancook, Warren Cunningham, F. B. Riek and all others who contributed so much toward making this convention an outstanding success, we offer profound thanks. Their efforts toward entertainment, both the members and their ladies, will long be remembered. The trip to Alford Refrigerated Warehouses was enjoyed by everyone and the ladies are especially appreciative that they were invited.

It is recommended that the Emerson Brandt eulogy presented by Angus Casberg be furnished to each chapter of the association. During the past year, the association has lost the following members: William S. Baker, Fort Worth; Fred Berk, Chicago; Emerson Brandt, Chicago; William Comfort, Elmira, N. Y.; Hayes T. Cory, Los Angeles, Calif.; James R. Cummings, Seattle, Wash.; Arnold J. Hecker, St. Louis, Mo.; Marinus Pedersen, Fresno, Calif.; William C. Reinhard, Houston, Texas; J. A. Rodgriguez, New Orleans, La.; F. J. Schuber, New Orleans, La.; and Lloyd L. Wenner, Los Angeles, Calif. We honor them in memory and stand for a moment in silent tribute.

It is recommended further that two full pages be set aside in the Operating Data Book for testimonials from large operating companies, outlining benefits that have resulted through the membership of their engineers in NAPRE. A recommendation is also made that after all chapter elections have been held this year, a chapter page be published in the NAPRE section of ICE AND REFRIGERATION giving the president and secretary of each chapter with their addresses.

Following these reports, the delegates approved the credentials and auditing reports. Nominations were opened, the slate of the nominating committee was placed in nomination and the nominees elected unanimously. Resolutions of thanks were approved enthusiastically and those resolutions pertaining to the Operating Data book and the reproduction of the Emerson Brandt eulogy were adopted. Other motions pertaining to the operation of the Association were referred to appropriate committees or the Board of Directors.

The convention adjourned after presentation of the standing membership trophies to B. J. Mancuso, president New Orleans Chapter and H. G. Turner, president of the Tulsa Chapter, winning chapters of the 1952 membership contest.

N A P R E

Question Box

H. G. Venemann, Professor of Refrigeration, Purdue University and chairman of NAPRE Educational Committee, answers members operating problems monthly in this column. Send questions to Chairman H. G. Venemann c/o Purdue University, West Lafayette, Indiana.

Tower Heat Transfer

Question No. 937: Which renders the greatest heat transfer in a cooling tower, sensible heat or evaporation.—T. M. C.

ANSWER: Most of the cooling effect on the water passing through the tower is accompanied by evaporation of a small part of this water. Under some conditions 100 percent of the cooling is done by evaporation.

The Marley Company was kind enough to answer this question as follows:

"Water in a cooling tower is cooled about 75 percent by evaporation and 25 percent by sensible heat transfer. The heat contained in water vapor is known as the latent heat of vaporization. Air, absorbing heat for water through the evaporation process, is capable of cooling the water below the atmospheric 'dry-bulb' temperature (air temperature registered by the common household thermometer). This is of basic importance to the whole subject of heat transfer from water to air."

I presume that the 75 and 25 percent figures represent common practice under average operating conditions throughout the year.

In the following example, it may be noted that evaporation accounts for all of the cooling.

Example: 200 gpm of water are cooled from 96 F to 87 F and 1420 lbs. of air per min. are cooled from 95 F dry bulb and 78 F wet bulb to 90 F dry bulb and 90 percent saturated. The make up water was 15.9 lb. per min.

The evaporation of the make up water amounted to approximately 16,700 Btu per min.

The sensible cooling of the water was about 15,000 Btu per min.

The sensible cooling of the air was 1720 Btu per min. Hence you can see that the 16,700 Btu required to evaporate the make up water came from the sensible heat removed from the cooling water circulated over the tower, and the sensible heat removed from the air passing through the tower.

It is possible under certain conditions for the air to leave the tower at a temperature higher than when it entered, and still be below the temperature of the entering water. In this case the cooling of the water is accomplished by both evaporation and sensible heat.—H. G. Veneman.

Sprinklers in Low Temperature

Question No. 938: Fire recently caused severe damage to our cold storage plant. Water, from fire fighting, caused more damage than the fire. In rebuilding, I am faced with high rates unless I install sprinklers. I can't visualize sprinklers functioning in sub-zero sub-freezing temperatures. What types of systems are adaptable to cold storage plants?—R. C. S.

ANSWER No 1: A dry pipe sprinkling system is necessary in sub-zero rooms in order to prevent the water from freezing in the pipes when there is no fire.

A dry pipe system is one in which dry air under pressure is pumped into the pipes or one which is under a partial vacuum at all times when there is no fire.

In either of these dry pipe systems the water automatically rushes in as soon as a fire reaches a fuzible plug in the piping system. Any architect or fire insurance company could furnish you with the names of companies that manufacture dry pipe systems.—H. G. Venemann.

ANSWER No 2: In response to your request for information on sprinklers we took the time to investigate many of the cold storage plants in this area to determine whether or not they were equipped with sprinkling systems. We have learned that although a great number of plants have such systems installed, many new and modern plants do not.

Prior to our local survey we were aware of the fact that sprinklers were used in cold storage plants in both high and low temperature rooms. In some localities, they are required by code and in others, somewhat like yourself, plant owners have found that the substantial reduction in fire insurance rates warranted the installation.

A major disadvantage we have learned from the plant operators contacted, is the initial high cost of

the installation including the erection of additional water towers where the plant was remote from the city pressure lines; water damage in event of fire was another major disadvantage. Lesser disadvantages pointed out was a heat gain due to penetration of cold storage walls by springler mains and headers. This disadvantage is combatted by applying insulation to the mains and headers within 6-9 feet of the insulated wall and on the warm side of the wall, not the interior of the room. Protection of the sprinkler heads from physical damage was another lesser disadvantage pointed out to us. Correct fusing temperatures for the sprinkler heads was not considered too great a problem.

Some large Chicago cold storage plants have sprinklers in several of their multi-story buildings which are of structural steel and masonry construction. Others, single story frame and concrete construction, are not equipped with sprinklers, although construction in some instances has been completed within the last 18 months.

Most of these systems employ an air pressure system where the sections of the sprinklers within the rooms are charged with compressed air. Release of the air through a sprinkler head reduces pressure on a valve in the line, admitting water from the other portion of the system.

Have you considered the use of other systems of fire prevention or detection such as an air detection system? Increase of air pressure in tiny tubes running through the protected areas, set off an alarm and/or activate the sprinklers. We understand that air alarm systems alone may not effect as great a rate reduction for you but it should merit consideration.

We would further advise you to consult with your local Underwriters Association or take your problem up with the rating bureau of the National Board of Fire Underwriters in your state before coming to any definite conclusions as to whether you should or should not install a sprinkler or a fire detection system.—the Editor.

Cooling Water Consumption

—Question No. 939: Is there any rule of thumb for "guesstimating" the number of gallons of cooling water required per ton of refrigeration produced per minute? (a) in shell and tube condenser (b) in cooling towers? —B. C. M.

ANSWER: A good rule of thumb for estimating the water requirements of any type condenser is this: Use 30 gpm degrees per ton of refrigeration. In other words the gpm of water multiplied by the degrees of temperature rise should equal 30. For example: If the temperature rise is to be 10 degrees, 3 gpm per ton should be circulated. Or if the temperature rise is to be 5 degrees, 6 gpm per ton refrigeration should be circulated.

This is based upon removing 250 Btu per ton of refrigeration in the condenser. Sometimes it takes less than 250 Btu and at other times it may require more, but, if a rule of thumb is to be used, the figure 250 strikes a happy medium and is usually on the safe side.

A 5 degree rise in water temperature necessitating 6 gpm per ton is a good figure to use with cooling towers. However, if one is purchasing water from the city and dumping it into the sewer after one passage through the condenser it might be economical to use less water and increase its temperature rise to 15 or even 20 degrees.

Table XXXIV, page 280-281, of Refrigeration Theory and Applications gives practical tonnage capacities which may be expected from each 2 inch tube of vertical shell and tube condenser 14 feet long. This table takes into consideration the following variables: water rate, initial water temperature, suction pressure and condensing pressure.—H. G. Venemann.

New Questions

Charts on Heat Losses

Question No. 940: Where will I find charts on radiation heat losses through walls of various types of construction?—L. J.

pH Values

Question No. 941: I've just taken over a job as operator of a refrigeration plant. With no chemical background and little academic or engineering education, I find I'm lost on such references as pH values. What is meant by that term? And what pH number is proper for my condensing water? I have a tower for cooling purposes.—D. F. K.

Maintenance Time Table

Question No. 942: In my new job with a food processing plant, I have a considerable number of centrifugal and rotary pumps. None have been overhauled or maintained for years. Do you have, or could you suggest where I may find a maintenance time table that I can follow (as well as show to my boss)?—D. F. K.

News Notes and Chapter Activities

Los Angeles

FRED HERR

MEMBERS of Los Angeles Chapter NAPRE were given an opportunity to see how traffic court functions and what actually transpires when a motorcycle officer orders a driver to the curb on suspicion that something other than iced tea has been imbibed.

As part of a traffic safety program presented at the November 5 meeting under the direction of William Osborn, safety engineer of the California Consumers Corporation, the meeting hall in the Terminal Club was literally converted into, first, a curbside conference point between two traffic officers and an allegedly drunken driver; and, second, into a traffic court, without, however, the painful consequences to the members that usually accompany such a session.

In charge of the presentation was Sergeant J. Paul Hughie of the traffic education division, Los Angeles Police Department, assisted by Officers Burbank and Burdick, who gave a realistic test to a suspected driver.

Daniel M. Gormon of the Union Ice Company volunteered for the role of drunk driving suspect. To make the test as realistic as possible, Gorman was escorted to a nearby bar 15 minutes before the session opened and instructed to down three or four drinks of whiskey, a chore which Danny performed with commendable alacrity and unquestionable realism.

Officers Burbank and Burdick then demonstrated the two methods by which police determine whether a driver has partaken of alcohol and the degree of his intoxication, if any. Gorman, acting out the role of an indignant driver to perfection, was put through the so-called 520 Field Sobriety Test. He was asked to walk a straight line, heel and toe; to spread his arms wide and touch a finger to his nose to determine his co-ordination; to pick up coins from the floor to determine balance, and other tests to evaluate his mental and muscular control.

Danny came through that test with apparent flying colors although he was greeted with cries from the audience advising the officers that this was without doubt a confirmed "wino" who should be thrown into the clink.

The police officers next gave a demonstration of the Intoximeter to which suspects are subjected when

the field sobriety test is indeterminate as to condition, Gorman was asked to blow up a rubber balloon. His breath, passing through various tubes of chemicals in the unit, was supposed to indicate by color changes whether or not his system contained sufficient alcohol to warrant his being booked as an unsafe driver. If the chemical changes color in less than 39 seconds, the suspect is presumed to be in an unsafe condition. It took 74 seconds in Danny's case, so, over the raucus protests of his fellow NAPRE'rs, he was pronounced sober enough to drive.

The point the officers emphasized was that the Intoximeter Test definitely indicates when alcohol has been consumed, irrespective of the amount.

In the second part of the program, Sergeant Hughie presented the police department's latest traffic film. This featured Los Angeles Traffic Court Judge Roger A. Pfaff and showed what a driver may expect when hailed into court for a traffic violation.

The presentation was in line with the chapter's custom of annually devoting one evening to a safety subject, and was arranged by Regis Gubser, chairman of the educational committee, and William Osborn of California Consumers Corp.

President Edgar M. Marrs of the Union Ice Company called the business session to order at 8 p.m. following adjournment of the preliminary class in which Instructor George M. Paulick resumed discussion of Condensers, in Chapter 7 of Guy King's book.

Thirty-eight members and guests answered roll call. The comparatively light attendance was attributed to the fact that it was the night after election and many members stayed home, either rejoicing or grieving over the election outcome.

With the 1951-52 membership drive a matter of history, the chapter is already launched on the 1952-53 campaign and has two new members lined up. Admitted at the November 5 meeting were John P. White and Harold M. Rothrock.

President Marrs appointed the following nominating committee to draft a recommended slate of officers and directors for 1953; Rudi F. Kettler, chairman; George Paulick and R. L. Maple. Their recommendations will be presented at the December 3 meeting for consideration and balloting.

Ed L. Nelson, chairman of the entertainment committee, asked for approval of a revision of plans for the December meeting schedule. He proposed that the Christmas Party with seasonal entertainment and refreshments, originally planned for December 17, be moved forward to December 3, which would be the year's last meeting. He also suggested that January 7 be designated as "Get Going Night," with a dinner, music and selected entertainment. Both suggestions were approved.

In retrospect, as the year draws to a close, Los Angeles Chapter may be said to have experienced an exceptionally successful and progressive year, under the capable direction of President Marrs, who was ably assisted by Secretary Donald M. Byl.

The membership rolls were increased by about 70. Although the final figures were not available as this was written, the chapter seemed certain to be at or close to, the top in the 1952 national drive. For this a full measure of credit must go to W. R. Burnett, the energetic and resourceful chairman of the membership committee, and his hustling assistants, Don Byl, Frank Elliot, Henry Hawkins, E. A. Johnson, R. L. Maple, Ralph M. Moore, H. R. Murray, C. C. Nordholm and V. A. Stubblefield.

Frank Muzzy's attendance committee is also due for an orchid in that they developed average meeting attendance to over 60 by various means designed to bring out the membership. Door prizes at each meeting, with only those actually in attendance eligible to win, and after-meeting coffee-and-doughnut periods were among the ideas Muzzy came up with to boost attendance.

Educationally, the chapter had one of its outstanding years. The chairman of the committee, Regis Gubser, drew up the 1952 speaker's program in advance for practically the entire year. This gave the members a chance to know in advance what was to be offered. The same arrangement is contemplated for 1953.

The Membership Index, prepared by a committee headed by Treasurer E. T. Quinn, is a roster and general information booklet that meets comparison with any similar volume.

In the entertainment field, Ed L. Nelson, Frank Eccleston, Rudi F. Kettler, D. E. Luedke and Douglas Pickett, who comprise that committee, came through with splendid programs on the three or four nights of the year when the chapter foregoes serious discussion of refrigeration problems for lighter diversifications. Four big "show" nights are on the agenda for 1953 — Get Going Night in January, Old Timers Night in June, Ham-and-Beans Dinner in September and Christmas party in December.

As head of a sub-committee of entertainment, Frank Eccleton again managed the chapter's annual golf tournament last June so superbly that this event is now regarded as an annual sports "must." The only problem Frank hasn't solved yet is how to find someone who can beat him in the golf tournament (he won in 1951 and 1952).

Jack Snyder and George Paulick handled the preliminary class in their usual competent manner in 1952 and succeeded in keeping attendance at the classes to an average of approximately 30. Finances during 1952 were capably handled by William F. Losch, Rudi Kettler and H. N. Royden. As a matter of fact, all the committees functioned so effectively in 1952 that it would not be surprising to see the personnel of most of them retained intact in 1953.

NAPRE Department

Rio Grande Valley

ARMIN DONEIS

AFTER a spell of unsettled wanderings from one meeting place to another, our Rio Grande Valley Chapter has finally found a "home" or a club-room where we can spread out and settle down, with room for charts and a technical library. Through the courtesy of the Central Power & Light Co. we have been granted an ample space at the La-Feria ice plant of C. P. & L. Co., and sufficient materials for the building of a good meeting hall.

For the past several weeks the "old faithfuls" have been meeting regularly to speed the construction of walls. Instructor John Muller has laid aside his chalk and his slide rule for a while to supervise the erection of the walls, and Cliff Musch has been his able assistant in directing the framing. A. M. Casberg, B. F. Wilson, Jr. and Clyde Young, showed their skill in the handling of saws, while Allie Allbright did a "daring young man" act high in the air doing some fancy nailing on the ceiling.

Doneis and Chapman were the "concrete termites" boring holes for anchor-shields, while Calvin Burg and Russel Sawyer assured that the walls would be plumb and true by keeping their rules and plumb lines busy. In the background, appraising the whole scene and offering a good suggestion now and then, was R. A. O'Neill, who is the daddy of the whole idea, and who secured the materials through persuasion along the proper channels.

Just prior to this series of "construction meetings", our Chapter enjoyed an informative session at which Otto Kunze described the construction, operation, and design of a heat pump, and illustrated the advantages that this sort of installation would have in a region like the Rio Grande Valley, where winters are mild and there's need for air-conditioning most of the year either from the heating or cooling angle. Mr. Kunze is an engineer in the Commercial Department of the C. P. & L. Co. In the course of his discussion of the heat pump, he described an installation which is being made at the San Benito offices of C. P. & L. Co. as a pilot plant, for test purposes, preparatory to introducing the heat pump to the Valley trade with test data to answer all the questions that may arise relative to application of this equipment in our subtropical region. Numerous questions following his talk gave evidence of the interest and appreciation of the members for Mr. Kunze's talk.

Pittsburgh

O. P. KNOCH

AT OUR October 15 meeting, the following were elected as officers: Louis P. Mantz, Pres., James Reiter, 1st Vice-Pres., Alois Palmier, 2nd Vice-Pres., Otto P. Knoch, Sec. & Treas., Alfred Lossing, Sergeant-at-Arms. Mr. Al Wiseman and Mr. James B. Moore have been chosen to represent the Pittsburgh Chapter at the National NAPRE Convention at Dallas, Texas.

N.A.P.R.E. Department

Chicago

DOUG BENTON

OUR LAST meeting in October featured a presentation by D. R. Walser, District Manager of the Wright Chemical Corporation. Mr. Walser was assisted by M. A. Baily, Technical Director for Wright; A. Pasowicz, Research Director, and E. Kreusch, Research Chemist.

Mr. Walser's talk on "Practical Scale Control and Scale Removal in Evaporative Condensers," will be published in the next issue of ICE AND REFRIGERATION.

At this same meeting, our instructor, Gene Rytlewski, finished up the discussion on evaporative condensers and started on piping in the Guy King course.

On November 4, the Chicago Chapter heard Past President, Harold Micheler, conduct a class of instruction on pipes and piping. As a sort of review, Orville E. Bloebaum, sales engineer with the Marley Co., Inc., conducted a "Question and Answer" session on cooling towers. Mr. Bloebaum augmented his talks with the distribution of loose leaf folders on tower operation, water treatment, water distribution, air movement and maintenance. A complete set of Marley quizes together with answers was presented to all the members present. These quizes are in loose leaf form and are ideal for keeping in the standard 3-ring binder. The Chicago Chapter membership is indebted to Mr. Bloebaum and the Marley Company for their consideration.

The November 18 meeting consisted primarily of an inspection trip arranged at the last meeting by Member Clifford Rife. Mr. Rife contacted Sam Sachs of Skidmore, Owings & Merrill, and John W. Harris Associates, Inc., for a field trip to inspect the new air conditioning plant in Chicago's new Greyhound Bus terminal. This ultra-modern structure rivaling New York's famed terminal, was equipped with a sound-proof air conditioning system by Carrier, with Marley cooling towers of a new type and design installed on the roof. The ventilating system was installed by Mehring & Hanson, the air conditioning and piping work by Gallaher & Speck, Inc.

The trip was under the direction of Sam Sachs of Skidmore, Owings & Merrill who designed the mechanical end of the plant. He was assisted by Roger Wilson. Members of Chicago Chapter take this opportunity to express their appreciation for this excellent engineering presentation by the personnel and firms mentioned above.

San Francisco

DAVE MASTERS

EDITORIAL NOTE: The following meeting notice was received by National Headquarters. San Francisco feels that this meeting notice would win any and all contests for humorous meeting announcements. Can any chapters top it?

"Meeting . . . Wednesday—Oct. 22, 1952, 7:30 P.M.

Sorry to state that the appearance of 'Ike' or 'Adlai' at this next meeting is most unlikely, but can definitely promise you the presence of our very fine nonpartisan professor, Don Bryant, who will expound on the subject of 'Refrigerant Piping and Accessories.' . . .

". . . Glad to report that Orman New, our Past Prexy, is up and about after a short siege of illness. Best wishes from all the gang, Orman, and please take it easy!

"This is Dave Masters, pinch-hitting for Frank Cordoza, who is embarking on a trip to the 'Wilds of Montana' for about two months, to set up a New Cheese Plant. (So all you Montana Mice, please take notice!) (Signed) Dave Masters, Pinch-Hitting Secretary."

St. Louis

KEN HOLADAY

At our meeting October 20, Instructor John Dabbs did a great job with the semi-monthly study class. The combination of good text and good instructor makes it interesting to learn things that might otherwise be tiresome. The NAPRE text is the major feature of the chapter's educational program this year, and members are finding a lot of satisfaction in the thorough and systematic drill we are getting.

Members of the chapter who were unable to attend the Fall Jamboree October 11 at the VFW picnic ground in North St. Louis are resolving right now to miss no more such good times. That includes me. Ernie Acey furnished the information for this report.

The affair was planned by Bill Wright and his committee. Ed Lotte, Les Fleiter, Gene Bishop and Mac McCarthy were busy all day at one job or another, pushing, pulling, toting or cooking. But even the work was fun. The weather was perfect for the energetic members who organized a game of Indian Ball, and a horseshoe tournament. At the sheltered barbecue pit there was a lazy crowd that stood around all afternoon drooling as the ribs sizzled. People seemed to act thirsty, but there was plenty of water and other beverages to suit all tastes.

The following friends of NAPRE contributed to the success of the party by putting up attractive attendance prizes: Frick Company, Griesedieck Bros. Brewery Co., Star Iron Company, L. V. Fleiter Company, Garlock Packing Company, R. H. Spangler Company, Eagle Iron Company, Carl F. Gast Company, Stovey Company, N. O. Nelson Company, Maull Barbecue Sauce Company.

President Charley Wunderlich called attention to the annual national membership contest just closed. While the results are not to be known until the Dallas convention, records indicate that the chapter will have a creditable showing in new memberships and renewals. Members were urged to co-operate in getting 100 per cent renewals promptly in 1953, and to join in the solicitation of prospective new members.

Ed Lotte and Stan Tatalovich were designated as delegates of the chapter to attend the Dallas convention. President Wunderlich was empowered to appoint other delegates up to the number to which the chapter is entitled. A fund was appropriated from the chapter treasury to cover a portion of the delegates' convention expenses.

Memphis

CHAS. A. CONLEY

THE meeting of Tennessee Chapter No. 1 on Wednesday, October 15, was movie night. The Modern Talking Picture Service Inc., showed two talking motion pictures.

One picture—"The DuPont Story," was in colors. It gave the life history of the DuPont family and their achievements in the field of mechanical engineering. The picture was very interesting and educational as it told the story of these folks and their great enterprises for "Better Things for Better Living." All the hardships, trials and tribulations they went through to make the great success they have of the DuPont enterprise was vividly depicted.

The other picture, "Service Unseen," was made by the Carrier Corporation. It told of the development of the air conditioning field and the various applications of air conditioning for industry as a whole.

The Grinnell Company provided a third picture entitled "Crusader Against Fire." This was a fine picture, as it showed how sprinkler systems were installed in the various plants to guard against fires. The picture showed how sprinkler heads were put into operation causing water to spray out a fire. This picture opened the eyes of lots of those who saw the value of a sprinkler system.

At the regular November 5 meeting, H. L. Todd talked on the King course, pages 185 through 191. The subject was defrosting of the various types of evaporators and the different methods of defrosting. He used the blackboard to help with his talk. There was a lot of interest taken in the subject as defrosting is a pain in the neck to all operators of refrigerated rooms, especially low temperature rooms.

An educational meeting was held at Hotel Chisca on Wednesday, November 19 at 8:00 p.m. H. L. Todd talked on the King Course, pages 192 through 201, subject to various types of Drives for various types of ammonia compressors. The delegates made a report on the Convention.

Prof. H. G. Venemann, Chairman of the National Educational Committee for many years arranged the very fine and worthwhile Education Programs for the Conventions. The Association hopes that it will be blessed by having Prof. Venemann as its Educational Chairman for many more years to come.

The Convention Program was full of fine worthwhile information. Along the entertainment side of the Convention—well, you know those Texans do things in a big way!

Detroit

L. L. ADAMS

OPENING meeting of the Michigan fall season was Thursday, October 23, at 6:30 p.m. in Carl's Hall, Gratiot Avenue at Holcomb. The educational session was conducted by Robert C. Doremus. The new Guy King refrigeration course was briefly reviewed and then the course referred back to refrigeration fundamentals. Forty-two members were in attendance which was considerably above average. We do not look for too large an attendance next meeting as the date falls right at the peak of the deer season and many have already indicated that they will be up in the North Woods.

The regular educational meeting held November 13 was conducted by Boyd Kitts. Review of the Guy King refrigeration course up to the 7th section was continued. George Bright, President and delegate to the National Convention, reported at length on the activities there. Mr. Bright delivered a paper entitled "Modern Brewery Practices." Mrs. Bright accompanied our Past President on the trip to Dallas.

Stockton, Modesto Chapter

HENRY C. DYER

OUR FIRST fall meeting was held at Union Ice Company, Plant No. 18, in Stockton, California, November 3. We had a fair attendance for the first meeting and hope for the coming year we will attain 100 per cent attendance at many of the meetings. Our Chapter is headed toward a campaign for new members in 1953. While many of us had looked forward to the National Convention in Dallas, circumstances prevented most from attending. C. C. Berkeley of the Modesto Refrigerating Company presented our Chapter. He planned to be back in time to make a complete report for our meeting on November 17.

Seattle

JIM BENNETT

WASHINGTON Chapter No. 1, Seattle, met on Thursday, November 13, at the Central Y.M.C.A. Instructor, Frank Gellert, expounded on valves, capacity controls, and condensers.

For the information of those members who were not in attendance, the Chapter moved to levy a 25 cent assessment per member on next year's dues in order to give a suitable amount to the Emerson Brandt memorial trophy fund. National Headquarters had suggested that the chapters give an amount of their own choosing and on a voluntary basis. Members present felt that this would be a sure way of reaching the members since many cannot attend regularly. It was also moved that the Chapter pay $1.00 extra for back issues of the study course for each new member. Members must be on hand to get this copy of the 1952 Data Book. We have considerable copies still unclaimed.

The following men were voted into the Chapter at this meeting: James H. Vosburgh, Broder Canning Co., Lethbridge, Alberta, Canada; Charles H. Cothran, American Marietta Co., Seattle; Norman Langdalen, Garden Court Apts., Seattle; Ruell B. Powell, North Star Fisheries, Seattle; Harry L. Dennis, Jr., Arden Farms, Seattle.

The Nominating Committee, headed by Bob Hutchinson is due to put up a new slate of officers at the last meeting of the month. Be on hand to vote for your officers. Harry L. Dennis was the lucky winner of a pocket thermometer as an attendance prize.

NAPRE Department

Tacoma

C. W. E. JOHNSON

AT THE meeting October 25, George Henderson of the Consolidated Service Co., of Seattle gave a very interesting talk on an improved type of ammonia absorption system. The outstanding improvement is a distallation column, a reflux controller, a hermetically sealed aqua pump, and a capacity control. The distallation column and the reflux control takes the place of the analyzer and rectifier of the older systems giving automatic control to the dehydration of the ascending ammonia vapors from the generator, so that the evaporators receive 99½ percent anhydrous ammonia.

The capacity of the system is regulated by an automatic control on the suction line of the system that actuates the steam pressure reducing valve on the generator; as the demand for refrigeration increases, the control opens the steam valve more and when the demand is less, the valve is adjusted to meet the smaller load.

The aqua ammonia pump which is the only mechanical moving part of the plant, is an oscillating plunger type, hermetically sealed, electrically driven. Mr. Henderson spent considerable time developing the pump and claims it is simpler and more reliable than other pumps that have been used in earlier installations. The system has a good flywheel effect inasmuch as the pump has a constant speed and capacity, and at light loads the quantity of anhydrous ammonia builds up, the aqua ammonia in the generator becomes weaker and if the load decreases enough an equilibrium is attained in the generator between the steam temperature and the aqua ammonia temperature, so the steam consumption is automatically controlled according to the load. No weak liquor cooler is necessary because of the efficiency of the heat exchanger.

According to Mr. Henderson the system has great possibilities in the low temperature field where blast and tunnel freezers are used to freeze commodities at very low temperatures, because the thermal efficiency is greater and the loss of capacity is less than occurs in the operation of a compression system. Savings of 30 per cent or more are said to be obtained in operation and maintenance and the costs of the plants are 25 to 50 percent less in capacities of 50 tons or more.

Mr. Henderson has installed ten of the plants aboard ships and about twelve in various industries, including one at Washington State College that maintains temperatures of -70 F.

A meeting notice from Jim Bennett, Secretary of the Seattle chapter was read, activities noted and placed on file. The 1952 NAPRE Data books were distributed to all members present.

Los Angeles Joint Meeting NAPRE and RSES

A JOINT meeting of the Los Angeles chapters of the Refrigeration Service Engineers Society and the National Association of Practical Refrigration Engineers was held at the Royal Palms Hotel, Los Angeles, on the evening of October 22, to participate in an educational program dealing with automatic refrigeration controls presented by officials and representatives of the Alco Valve Company of St. Louis, Mo.

The local R.S.E.S. Chapter served as host for the dinner meeting which was attended by a large group of approximately 100 members of the two associations, and their guests. The attendance was approximately evenly divided, with 35 present from the R.S.E.S. and a similar number representing the N.A.P.R.E., plus a sprinkling of A.S.R.E. members and unattached guests.

While an attempt was made by Chairman Dan Williams to determine how many of each group were present, this became difficult when it was seen that in quite a few cases a man held membership in both the R.S.E.S. and the N.A.P.R.E.

Dan Williams, president of the R.S.E.S. chapter, served as chairman and welcomed the N.A.P.R.E. group in behalf of the host association. "This extremely gratifying turnout of nearly 100 members of our two associations definitely seems to indicate the desire for closer cooperation and more frequent joint sessions of this kind," Mr. Williams said. "Let us then make it a point to meet together more often in the future, particularly when one or the other of our groups has arranged an outstanding program that would appeal to all of us."

Mr. Williams then introduced Edgar M. Marrs, president of the N.A.P.R.E. chapter, who, in behalf of his associates, expressed his and their pleasure at being invited to join in the meeting.

N.A.P.R.E. and R.S.E.S. officers and distinguished guests seated at the head table who were introduced by President Williams were: Mr. Marrs; Donald H. Byl, N.A.P.R.E. secretary; E. T. Quinn, treasurer; Regis Gubser, educational chairman; Frank Eccleston, first vice-president; H. Adamson, R.S.E.S. secretary; Gordon

Clarke, educational chairman; Arley L. Baker of St. Louis, Mo., sales promotion manager of Alco Valve Company; Tom Grace and Ken Robertson, field engineers of the Pacific Scientific Company, Los Angeles.

The N.A.P.R.E. honored the R.S.E.S. invitation by attending full force with all its officers, directors and principal committee heads. Noted among these latter were Ed L. Nelson, Frank Muzzy, George Paulick, Rudy Kettler, L. H. Benedict, and various others.

The evening's program was divided into a social period from 6:30 to 7:30 o'clock, chicken dinner from 7:30 to 8:30, and the educational session beginning at 8:30 o'clock.

The original intention of the sponsors had been to present a premier showing of a 30 minute full color sound film with live characters, "The Story of Automatic Refrigeration Controls." This film had been prepared by Alco engineers who devoted more than a year's time and work to assembling the filmed story to promote a fuller understanding by refrigeration men of the development, operation and application of controls.

Arley L. Baker of Alco's St. Louis office planed to Los Angeles with the film to personally give the commentary and collaborate with Tom Grace and Ken Robertson of Pacific Scientific Company, Los Angeles, in presenting the program.

Mr. Baker, to his regret, found it necessary to report to the assembled R.S.E.S. and N.A.P.R.E. engineers that after flying the film out it was found that it was not quite ready for presentation and had to be returned to St. Louis for some added refinements.

As a replacement, Mr. Baker presented an exceptionally fine film prepared for the Navy by the York Corporation for training Navy personnel in refrigeration systems designed for submarines and other naval craft. This was followed by a film on the lighter side entitled "Ducks Unlimited," which the bird hunters among the assemblage proclaimed one of the finest of its kind ever produced.

(Continued on page 59)

Theodore G. Peukert

THE death of Theodore J. Peukert, secretary-treasurer of Associated Refrigerating Engineers, Los Angeles, and a member of the Los Angeles chapter N.A.P.R.E. occurred from a heart attack while on a business trip in Northern California on November 21. He was 49 years old.

Mr. Peukert collapsed in his automobile while he and Willard Coons, director of estimates for the firm, were driving between San Jose and Tracy, while on a trip during which they were making surveys of various refrigeration plants.

Mr. Peukert was a native of California. He was born on his father's ranch in what is now the heart of Los Angeles, on April 12, 1903. He was a widely known figure in the West Coast refrigeration industry. He started as a delivery boy at the age of 18 in 1921 for Gay Engineering Company in Los Angeles. By 1938 he had risen to the post of superintendent of all construction for that company.

In 1938, Mr. Peukert and four associates on the Gay Engineering Company staff organized Associated Refrigerating Engineers. These were Frank Hibbs, Sr., Frank H. Hatfield, William J. Neidhardt and William Murray. By 1952 the firm had become one of the largest designers and installers of refrigeration systems in the western states.

At the time of Mr. Peukert's death, he and Mr. Hibbs were sole owners of the firm, having some time ago bought out the stock interests of Mr. Hatfield, Mr. Murray and Mr. Neidhardt.

Fred C. Berk

FRED C. BERK, member of the Chicago Chapter No. 1, NAPRE, passed away in late October of this year. Mr. Berk was a veteran of World War I and died at the Hines Veteran Administration Hospital near Chicago. He is survived by his widow and two married daughters.

Mr. Berk will be remembered as a representative of the H. Vogt Company for almost 25 years in the Chicago territory. He started his career in refrigeration as an ammonia salesman for Armour & Company. About a year ago he left Vogt Company for a sales engineering position with Arctic Engineering Company, a distributor for the Howe Ice Machine Company. He was a member of the Refrigeration Manufacturers Association of Chicago and the Chicago Section of ASRE. His Masonic Lodge conducted the funeral services and a final tribute was paid at the cemetery by the Advertisers Post of the American Legion, of which he was a Past Commander.

Thomas F. Carter

THE death of Thomas F. Carter, 67, surviving partner in the Francis & Carter Company, Los Angeles refrigeration firm, occurred recently of a heart attack at Los Angeles. Mr. Carter's death came a little more than a year after the passing of his partner and long-time friend, Albert L. Francis, who died on September 3, 1951.

Mr. Carter's career in the west coast refrigeration industry spanned nearly four decades. Some 40 years ago both he and Mr. Francis served at the same time on the engineering staff of the York Company, then known as York California Construction Company. He subsequently served as manager of the refrigeration department of the O. J. Webber Company, Los Angeles Frick distributor; as sales manager for Baker Ice Machine Company in Los Angeles, and later in a similar capacity for the W. J. Finnegan Company, also in Los Angeles. In 1948, he and Mr. Francis organized the Francis & Carter Company, which he headed at the time of his death.

He is survived by his widow and two children. He was a member of Los Angeles Chapter, N.A.P.R.E., and Los Angeles Section, A.S.R.E.

Views at joint meeting of Los Angeles Chapters N.A.P.R.E. and R.S.E.S. Center: Speakers table shows Tom Baker, Pacific Scientific Co., Los Angeles, flanked by Arley L. Baker, Alco Valve Co.; and Gordon clarke, chairman of the Los Angeles R.S.E.S. Educational Committee. At right is a view of the guest speakers and officers of both chapters. (Pictures by Ed Nelson, Union Ice Co., Los Angeles.)

Refrigerated Warehousing Industry

NATIONAL ASSOCIATION of REFRIGERATED WAREHOUSES

Division of American Warehousemen's Association

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THIS MONTH IN BRIEF

Although cooler stored commodities for October 31 were below average they were equal to the occupancy last year, and freezer occupancy showed a gain of one point over the previous month. Occupancy by the end of November, it was expected, would be two to three points below October.

A study to determine the effect of pre-storage packinghouse treatments on control of decay of Florida oranges during storage, conducted by the Bureau of Plant Industry and the Refrigeration Research Foundation indicate that it would be worthwhile to treat all oranges going into storage

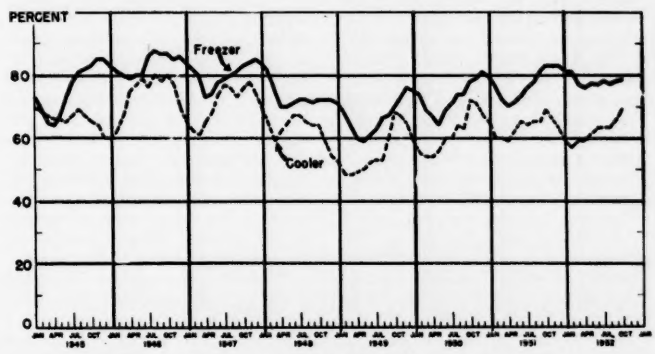
A request for decontrol of the commercial warehousing industry made by the American Warehousemen's Association has been denied by the Office of Price Administration.

Cold Storage Holdings October 31

NET accumulations of cooler stored commodities during October brought cooler occupancy up to 69 percent by the end of the month according to reports received by the Department of Agriculture. Although this level was below average for October 31, it was, nevertheless, equal to the occupancy last year at which time a 4 point gain was also reported during October.

Freezer occupancy on October 31, at 78 percent, showed a gain of one point over the previous month which compares with an average 2 point gain normally reported this time of year. Freezer occupancy has remained relatively stable since April, averaging between 77 and 78 percent monthly. Last year, on October 31, freezer occupancy was up to 83 percent which was the topmost point of the cycle. Despite the disparity between the 1952 and 1951 peak level, utilization of freezer space this year has been consistently above average during all of 1952.

A greater than 50 percent increase in cooler stored commodities raised the total weight in cooler space to 2.7 billion pounds. Accounting for almost all of this increase were the October gains in stocks of fresh apples, grapes, and vegetables which more than countered the net withdrawals of nuts and nutmeats, cheese, eggs, and meat products. On the other hand, holdings in freezer space



Occupancy of Refrigerated Warehouses 1945-1952

TABLE 1—COLD STORAGE HOLDINGS IN PUBLIC, PRIVATE AND SEMI-PRIVATE WAREHOUSES, APPLE HOUSES AND MEAT PACKING PLANTS (000 LBS.)

	Oct. 31 1952	Sept. 30 1952	Oct. 31 1951	Five Year Average
Meat and meat products, lbs.	550,965	587,234	499,293	409,262
Lard and rendered pork fat, lbs.	88,035	109,157	31,344	55,751
Frozen poultry, lbs.	277,200	182,786	259,920	224,385
Creamery butter, lbs.	101,574	111,319	94,611	120,639
American Cheese, lbs.	221,046	231,503	229,561	202,264
Other cheese, lbs.	19,585	20,743	21,131	22,606
Shell eggs, cases	992	1,709	527	1,007
Frozen eggs, lbs.	95,032	123,661	121,592	136,246
Apples, bu.	26,844	6,221	28,375	30,957
Frozen fruits, lbs.	322,057	327,531	379,207	348,926
Frozen vegetables, lbs.	571,122	530,091	554,175	411,773
Frozen fish, lbs.	198,488	190,493	171,924	156,445

TABLE 2—PERCENTAGE OF SPACE OCCUPIED BY PUBLIC COLD STORAGE WAREHOUSES (APPLE HOUSES EXCLUDED)

	Net Piling Space (000 cu. ft.)		Oct. 31, 1952 (%)		Sept. 30, 1952 (%)		Oct. 31, 1951 (%)		5-year Average (%)	
	Cooler	Freezer	Cooler	Freezer	Cooler	Freezer	Cooler	Freezer	Cooler	Freezer
New England	2,963	6,653	48	78	44	77	55	93	62	79
Middle Atlantic	28,065	33,352	72	85	63	84	70	87	69	82
East North Central	26,853	26,674	67	82	68	80	72	84	73	77
West North Central	9,225	17,944	61	62	62	60	67	71	76	74
South Atlantic	10,018	9,760	69	72	62	73	69	87	63	76
East South Central	2,101	3,433	77	87	89	88	85	88	78	81
West South Central	6,954	7,595	65	59	64	58	60	65	62	60
Mountain	987	1,886	72	87	64	81	60	86	68	75
Pacific	14,250	23,006	73	83	66	84	64	87	68	79
United States	101,416	130,303	69	78	65	77	69	83	70	76

increased to 2.2 billion pounds largely a result of increases in stocks of frozen vegetables, poultry, and beef. Cumulatively, the total weight in freezer space reached a new October 31 high by exceeding the previous monthly high by 96 million pounds. The combined weight in cooler and freezer space at 4.9 billion pounds was only 6 percent less than the record weight reported in storage on November 30, 1950.

Seasonal increases in storage holdings of fresh apples brought reported holdings up to almost 27 million bushels which were about 13 percent below the October 31 average. Last year, stocks totaled a little more than 28 million bushels. Holdings of pears fell off during October to less than 3 million bushels.

Except for October 31, 1949 stocks, current holdings of frozen fruits — 322 million pounds — were the lowest since 1944. Net withdrawals during the month amounted to 5 million pounds as compared with 9 million last year. Countering the net into storage movement of frozen apples, grapes, peaches, plums and prunes, Young, Logan and similar berries were net withdrawals of the other major frozen fruit items, particularly cherries, respberries and strawberries. Cherries, were down 4 million pounds to about 45 million pounds; raspberries fell off 3 million pounds to 24 million; while strawberries at 122 million pounds reflected an October net withdrawal of 8 million pounds.

Frozen vegetable stocks increased during the month to 571 million pounds with sharp gains reported in storage holdings of lima beans, broccoli, cauliflower, pumpkin and squash. Increased holdings were also reported for brussels sprouts, corn, and spinach, but storage gains for these items were not as great as for the first named group. Holdings of frozen peas were reduced to 178 million pounds during October — a reduction of 17 million pounds, while asparagus stocks went down to 14 million pounds. Orange concentrate stocks reported on hand October 31 were reduced to less than 15 million gallons which compares with almost 18 million in store the previous month.

A net disappearance of approximately 9 million pounds of creamery butter brought national holdings down to 102 million pounds by the end of October. This net reduction was one of the smallest ever reported for October and compares with an average October reduction of 14 million pounds.

Reported holdings of American cheddar cheese totaled about 221 million pounds on October 31 which compares with 230 million in store last year. During October, net withdrawals from storage amounted to 11 million pounds which were about average for this time of year and the change last year. Yet, when compared with previous October 31 stores, current holdings were the third largest on record.

Less than a million cases of shell eggs were in storage on October 31. The total of 992,000 cases compares with 527,000 cases on hand last year and average October stocks of one million cases.

Frozen egg holdings were not only below average on October 31 with 95 million pounds reported in storage, but at no time on record since 1938 have frozen egg stocks been as low on this date.

With net accumulations of about 65 million pounds of turkeys and 17 million pounds of fowls, total poultry stocks were up to 277 million pounds by October 31 a gain of 94 million pounds over the previous month. Yet, these stocks were slightly less than the record October 31 high reached in 1947. But, holdings of turkeys, at 135 million pounds, were the largest on record for October 31 and were only 5 million pounds less than the all time high of January 31, 1947.

Significant gains in storage holdings of frozen beef — 21 million pounds—brought national holdings up to 185 million pounds which were second highest on record for October 31. However, not since October 31, 1918 have frozen beef stocks been as large as they were last month.

The rapid rate by which frozen pork stocks were withdrawn from storage during October brought national holdings down to 107 million pounds by the end of the month. The 40 million pound net reduction during October compares with 17 mil-

TABLE 3—PERCENTAGE OF SPACE OCCUPIED BY PRIVATE AND SEMI-PRIVATE REFRIGERATED WAREHOUSES AND MEAT PACKING PLANTS (APPLE HOUSES EXCLUDED)

	Private and Semi-Private Warehouses						Meat Packing Establishments					
	Net Piling Space (000 cu. ft.)		Space Occupied—percent Oct. 31, 1952		Oct. 31, 1951		Net Piling Space (000 cu. ft.)		Space Occupied—percent Oct. 31, 1952		Oct. 31, 1951	
	Cooler	Freezer	Cooler	Freezer	Cooler	Freezer	Cooler	Freezer	Cooler	Freezer	Cooler	Freezer
New England	....	....	....	....	50	89	.....	.....	.....	.....	.....	.....
Middle Atlantic	1,288	1,456	55	54	65	88	734	186	100	92	65	83
East North Central	3,346	5,255	72	39	69	46	4,294	1,012	81	73	79	79
West North Central	164	779	17	68	87	81	3,922	3,573	90	56	90	64
South Atlantic	179	2,709	31	61	84	68	284	57	59	100	87	100
East South Central	2,101	3,433	77	87	—	—	67	90	100	88	47	38
West South Central	6,954	2,595	65	59	76	91	75	116	100	100	100	100
Mountain	464	6	81	....	91	98	.....	.....	.....	.....	89	98
Pacific	799	2,805	70	79	28	83	282	106	100	100	90	88
United States	6,240	13,010	67	56	54	70	9,658	5,140	86	64	86	71

NOTE: Blank spaces indicate that insufficient returns were received.

lion during the 5-year period ended 1951 and 28 million withdrawn from storage during October 1951. Yet, stocks were the third largest on record for October 31 and were exceeded only by holdings in 1934 and 1944.

Holdings of cured pork were down to 125 million pounds and, unlike frozen pork, were below average for this time of year. Lard holdings reflected seasonal losses and were reduced to about 86 million pounds which compares with 29 million in store last year and 54 million on hand October 31 during the 5-year period ended 1951.

Gains in holdings of fishery products during October brought total stocks up to almost 225 million pounds by the end of the month. This compares with 204 million in store last year and 182 million in storage on October 31 during the 5-year period ended 1951.

Storage Outlook

According to historical performance, cooler occupancy reaches its annual peak on October 31. This year, the level reported was 69 percent which was equal to the 1951 annual high but well below the high point reached in 1950. Since its low point (February 29), cooler occupancy increased 12 points which compares with a 9 point spread during a comparable period in 1951 and 18 points in 1950. The 1947-51 average change from low to high is 12 points. Occupancy by the end of November should be 2 to 3 points below the October 31 level. Freezer occupancy has not fluctuated as much as in the past but has remained within the narrow range, of 77 and 78 percent for the past 6 months. The freezer occupancy on November 30 should be no greater than 79 per cent

Refrigerated Warehousing

What is Freezer Space?

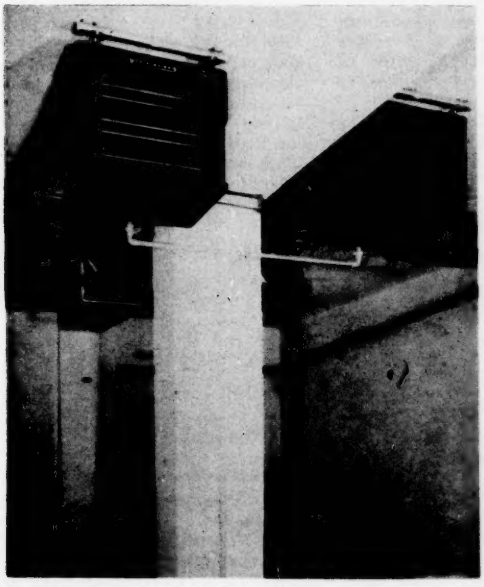
IN A recent issue of "Cold Facts," the question was asked as to the meaning of "freezer space," to find out if there was any unanimity of opinion among warehousemen as to what constitutes cooler freezer and sharp freezer space—the terms used by the U. S. Dept. of Agriculture. Replies were interesting. In general they agreed that cooler space is anything held from 28 to 30 F. up. Freezer space is anything held at 5 F. and below. It's the in between space that seems to cause confusion. Someone suggested calling it sub-cooler; another semi-freezer. The term "sharp freezer" seems to be used to denote blast freezing operations around 30 to 40 F. below zero.

Large Cold Storage Plant Provides Service For North Africa

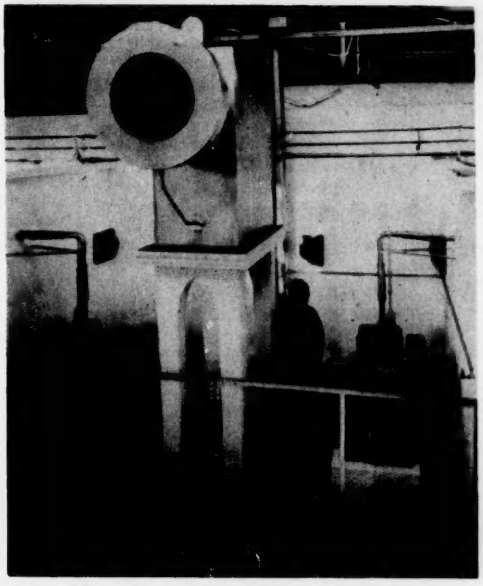
NOT too long ago, the huge continent of Africa was known as "The Dark Continent" — a place of mystery — but over the years these lands have been cultivated into productive agricultural areas, and many cities and costal towns have grown to be as modern as some of our own. Tangiers, in French Morocco, has developed thriving place of commerce.

To bear this out, a cold storage company in the city of Tangiers, named Depositos Frigorificos de Tanger S. A., recently completed the first large-scale commercial refrigerated storage building in North Africa. The main building houses a series of ten refrigerated rooms for cold and frozen storage of 450 tons of eggs, fruits, vegetables, and meat.

Refrigeration in the ten rooms is provided by 5 and 7½ hp. Frigidaire compressors combined with eight Frigidaire forced air cooling units in the cold storage rooms, and with Dole plates in the frozen storage rooms. Temperatures ranging from 0 to 40 F. are provided in the various rooms according to the requirements of the products to be stored.



Interior view of one of the cold storage rooms in the plant of Depositos Frigorificos de Tanger S.A. Frigidaire forced air cooling units and compressors provide refrigeration.



Two of the 7½ hp Frigidaire water-cooled compressors providing refrigeration for four of the cold rooms and two ante-rooms. In the center is a water tower and below is the pump.

North Atlantic Chapter Annual Meeting

THE North Atlantic Chapter of the National Association of Refrigerated Warehouses will hold its annual meeting at the Sheraton Biltmore Hotel and Squantum Club, Providence, R. I. December 10 and 11.

The meeting will start with a luncheon Wednesday noon, to be followed by a panel discussion on problems relating to loading and unloading trucks, conducted by Woody Caine as moderator, three warehousemen and representatives of three trucking companies. Wednesday evening cocktails will be served, courtesy of the Southern New England Warehouses, followed by a buffet dinner and open house as guests of the Merchants Cold Storage & Warehouse Company.

Thursday morning the annual business meeting will be held, followed by a panel discussion by A. B. Efroymson, Wm. Dalton, H. C. Diehl, and J. P. Johnson. Thursday afternoon a frozen food panel discussion will be held conducted by Frank Snavely as moderator, Al Huff, Birds Eye; Al Munkelt, Minute Maid; Bill Hahn, distributor; George Tutunjian, frozen food broker; three warehousemen; and Harry Schauffler, director National Association Wholesale Frozen Food Distributors, Inc.

At 5:30 p.m. cocktails and a clambake will be served at the Squantum Club.

Southwestern Chapter

AN INTERESTING meeting, well attended, was held recently at Dallas, Texas by the Southwestern Chapter of the National Association of Refrigerated Warehouses. W. J. Ryles, Southern Ice Company, Denison, Texas was elected chairman; S. A. Kadane, Pure & Cold Storage Company, Dallas, was elected vice-chairman; and S. C. Wentworth, Scobey Fireproof Storage Company, San Antonio, secretary-treasurer.

Dodds Re-elected Director Federal Reserve Bank

E. M. DODDS, president of the United States Cold Storage Corp., Kansas City, Mo., received word November 19 that he had been re-elected a director of the Federal Reserve Bank, Kansas City, for a three year term beginning January 1, 1953. This will be Mr. Dodds' second term.

The Effect of Pre-Storage Treatments for Oranges

A STUDY to determine the effect of pre-storage packinghouse treatments on the control of decay of Florida oranges during storage was conducted at Orlando, Fla. and New York, during 1951 by the Bureau of Plant Industry and The Refrigeration Research Foundation. The cold storage rooms were operated at 32 F. A summary of the results of the study has been issued as follows:

Valencia oranges that had been treated with Dowicide A-hexamine solution in the dip tank developed much less decay in storage than did similar untreated fruit. A borax dip treatment made 24 hours prior to the Dowicide A-hexamine treatment gave added control of decay, and the use of phenodor (diphenyl-treated) box liners reduced it still further.

It would appear that the Dowicide A-hexamine treatment supplemented by either the phenodor box liner or the phenodor-treated corrugated fiberboard carton offers an excellent method of controlling decay in stored fruit. In the present tests fruit so treated developed less than 5 percent decay when held for seven days at 70 F. following sixteen weeks' storage at 32 F. A borax dip 24 hours prior to the Dowicide A-hexamine treatment as mentioned above gave additional control of storage decay, and when used in combination with phenodor liners held decay to less than 2 percent in fruit stored sixteen weeks at 32 F. and seven days at 70 F.

Loss in weight among the lots with different packinghouse treatments ranged between 3.3 to 3.6 percent. The naked packs of oranges lost 4.2 percent as compared with 2.7 percent for fruit packed in boxes with phenodor liners.

Good control of decay was obtained when the fruit for storage was packed in phenodor-treated fiberboard cartons or in Bruce boxes with phenodor-treated box liners. Nevertheless, the smallest amounts of total decay occurred when the fruit was packed in the phenodor-treated fiberboard cartons.

Size of fruit influenced keeping quality; a greater amount of decay was noted in the large sizes (126 and 150 per box) than in small sizes (176 to 250 per box).

Tests showed that rootstocks affected storage quality of the oranges and that smaller amounts of decay occurred in the fruit on sour and sweet orange than in the fruit on rough lemon rootstock.

Six commercial carloads were stored in good condition for four to seven weeks at 32 F. at Providence, R. I., and Newark, N. J., but owing to unfavorable market conditions no profit was made by the venture. Favorable results were obtained in phenodor-treated fiberboard cartons but their slower cooling in transit offset some of their advantages in retarding decay. The added treatment of Dowicide A-hexamine may be advisable.

On the basis of results it would appear very worthwhile to treat all oranges going into storage with Dowicide A-hexamine and to use diphenyl-treated liners as an added precaution. It is also suggested that shippers grade fruit more carefully and avoid storing poor quality, weak fruit.

USDA Purchases Turkeys

THE U. S. Department of Agriculture has announced acceptance of sales offers for 5,834,000 pounds of frozen ready-to-cook 1952-crop turkeys under the surplus removal program announced August 26. Total purchases now amount to 41,167,578 pounds after adjustment for unconfirmed acceptances. The program is a means of providing an outlet for temporary surpluses of turkeys which are resulting in unfavorable prices for producers.

The recent purchases included: California 930,000 pounds, Illinois 998,000, Minnesota 1,230,000, Missouri 420,000, Nebraska 636,000, New York 240,000, Ohio 780,000, Oklahoma 270,000, South Carolina 150,000, and Virginia 180,000.

The turkeys purchased will be delivered during Ferbuary and March for distribution to non-profit school lunch programs. The purchases are being made with "Section 32" funds provided by Congress to encourage consumption of agricultural commodities by diverting surpuus quantities from normal channels of trade.

Further offers will be received each Tuesday through January 27, 1953, for delivery during February, March and April. Dealers and others may submit their bids to the Poultry Branch, Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C.

Correction

IN THE article on the new Lift-Slab method used in construction of the Merchants Ice & Cold Storage building at San Antonio, Texas, the leading illustration was labeled as Houston. This was an error. The Merchants Ice & Cold Storage Company is located at San Antonio. Sorry.

Fact Finding Conference

BIG opportunties ahead in poultry and egg merchandising, how to find them, and how to make the most of them, will keynote the Institute of American Poultry Industries' 24th annual Fact Finding Conference and Exhibit, to be held in the Municipal Auditorium, Kansas City, Mo., February 14-17, 1953.

The Exhibit will be larger than ever, with more than 20,000 square feet of display space full of equipment, supplies and services poultry and egg people use.

At 1:30 Sunday afternoon a special Opportunity Clinic will open the Conference program, bringing to the fore the goals this industry can expect to reach, what these accomplishments will mean to the individual operator, and what it will take, on industry's part, to cash in on these opportunities.

A Merchandising Clinic is scheduled for Monday morning—a Shell Egg and Egg Products Clinic for Monday afternoon—a Poultry Processing Clinic for Tuesday morning —and a Production and Procurement Clinic for Tuesday afternoon.

To dramatize the tremendous progress made in processing, merchandising and utilizing egg solids (modern-day, improved dried egg products), more than a thousand guests at the Institute Open House Sunday evening will see and taste the many food products being manufactured today that contain egg solids, including doughnuts, cakes and candy. In addition, some of the modern equipment used to make these foods will be operating in the Exhibit Hall, showing how today's commercial food plants turn out candy bars, doughnuts and the like on a mass production basis.

Following tradition, Institute members will hold their annual breakfast meeting Sunday morning. On Monday evening the Conference banquet will be staged in the new Hotel Muehlebach banquet room.

Liable for Lost Goods

WAREHOUSEMAN is liable for lost goods which he agreed to insure but didn't, a high court has ruled. In a recent case it was shown that the warehouseman failed to insure goods after agreeing to do so. The goods were later destroyed by fire. The court held the warehouseman liable for the full value of the goods, holding that when a warehouseman agrees to insure goods, he means he will insure against fire and other likely causes of loss. — Cold Facts.

Cost of CCC Bond May Be Included in Service Charge

AN EARLIER ruling has been revised by OPS regarding the invoicing of the CCC Bond to permit this cost to be included as part of the storage charge as required by USDA. This revision has been confirmed in the following communication received from OPS by the National Association of Refrigerated Warehouses.

"Warehousemen who propose to begin rendering bonding service for the Department of Agriculture or its agencies may make appropriate filings under Section 7 of Ceiling Price Regulation 34. Once ceiling prices for such bonding service have been established they may be invoiced and billed in any way that is satisfactory to the parties so long as the total price charged for all services rendered does not exceed the total of the ceiling prices for each service rendered."

Warehousemen have been advised that they may file their request for this new service with the regional OPS office and if within 20 days after acknowledgement of receipt of the petition they have heard nothing to the contrary, they may begin charging USDA for the cost of the bond. This cost may then be invoiced in any manner acceptable to both the warehouseman and USDA.

The petition should explain (1) that you want to establish a ceiling price for this new bonding service; (2) the amount of the ceiling price you wish to establish (this may be expressed as so many dollars and cents per $1,000 of bond or in cents per cwt., or any other convenient manner acceptable to OPS); and (3) how you arrived at this figure.

Special Storage Report Classifies Turkey Stocks

IN A SURVEY conducted recently by the Institute of American Poultry Industries on turkeys in storage as of September 30, reports were received from 223 warehouses. Of this number, 73 had no turkeys in storage. Some of these never store turkeys. The remaining 150 warehouses reported a total of 50,609,515 pounds of turkeys in storage at the close of business September 30, 1952. This includes 747,981 pounds of unclassified, held in five warehouses which had insufficient records to make reporting accurate.

The balance of 49,861,534 pounds was being held in 145 warehouses in 106 cities in 36 states and Washington, D. C.

Refrigerated Warehousing

Refrigerated Storage Of Military Rations

WITHOUT giving any of the many technical details, which have been discussed by the director with personnel of the Armed Forces and warehousemen during the course of several months, members will be interested to know that we have done all that we can to make available our technical experience and comments in aiding members of the Department of Defense to reach a decision about the cold storage of rations.

Our basic emphasis, following a consistently-expressed policy of several years, has been on the value of proper cold storage in arresting the deterioration of perishable and semi-perishable commodities. Because of this essentially status-quo maintenance of food quality in primary stock-piling under refrigeration, the time-distance planning for combat use in logistics can be more orderly and reassured that the food items will be acceptable when required in military feeding or perhaps urgently needed in combat areas.

Storage of semi-perishable items such as rations in uncontrolled environment may be satisfactory at times but its results are unpredictable and the extent of commodity deterioration often cannot be guaged, so that any practical prediction of the post-storage life is almost impossible. In instances like this, the accumulated technical experience of the Foundation's program now pays off in big dividends.—TRRF Information Bulletin.

Chicago Warehouse Group Approved by DPA

FORMATION of a Defense Warehousemen's Association in Chicago has been approved by The Defense Production Administration to provide for participation in a joint military storage contract. This is the second such group to be so approved. The first took place in Philadelphia. A similar agreement is nearing completion in New York City.

The warehousing association plan provides the Defense Department with an administrative procedure whereby all qualified commercial warehousemen within a major metropolitan area can participate in a single joint contract for storage of military supplies. This has application only to general warehousing and does not include refrigerated warehousing.

Warehouses Approved For Turkey Storage

THE following refrigerated warehouses have been approved for turkey storage by the Commodity Credit Corporation.

Dallas Area: New Ice Co., Guthrie, Okla.; Southwest Ice & Dairy Products Co., Enid, Okla.; Central Dairy Products Co., Oklahoma City, Okla.; United States Cold Storage Corp., Dallas, Texas.

Minneapolis Area: Minneapolis Cold Storage, Minneapolis, Minn.; Union Storage & Transfer Co., Fargo, No. Dak.; Cresthaven Dairy, Alexandria, Mo.; Goodrich Corp., Winona, Minn.

New York Area: Winchester Cold Storage Co., Winchester, Va.; Robinson Ice & Cold Storage Co., Winchester, Va.

Portland Area: Hazelwood Cold Storage Co., Spokane, Wash.; Northwestern Ice & Cold Storage Co., Portland, Ore.; Portland Ice & Cold Storage Co., Portland, Ore.; Central Refrigerating Corp., Seattle, Wash.; Terminal Ice & Cold Storage, Salem, Ore.

Kansas City Area: Mountain Ice & Cold Storage Co., Pueblo, Colo.; Belle Springs Creamery Co., Abilene, Kansas; Marionville Refrigerating Co., Marionville, Mo.; Merchants Refrigerating Co., St. Louis, Mo.; Parsons Cold Storage Co., Parsons, Kans.; Seymour Packing Co., Topeka, Kans.; C. A. Swanson & Sons, Omaha, Nebraska; United States Cold Storage Corp., Kansas City, Mo.

San Francisco Area: National Ice & Cold Storage Co., San Francisco, Calif.; National Ice & Cold Storage Co., Sacramento, Calif.; National Ice & Cold Storage Co., Los Angeles, Calif.; Modesto Refrigerating Co., Modesto, Calif.

Central Area: Indiana Terminal & Refrigerating, Indianapolis, Ind.; Merchants Ice & Cold Storage Co., Louisville, Ky.; Cincinnati Terminal Warehouses, Cincinnati, Ohio; National Terminal Corp., Cleveland, Ohio; Great Lakes Terminal Warehouses, Toledo, Ohio.

Tax Amortization

A CERTIFICATE of Necessity for tax amortization of new refrigerated storage facilities has been approved by the Defense Production Administration for the Tampa Cold Storage & Warehouse Corp., Tampa, Fla. Amount certified was $125,000 of which 55 percent was granted.

Storage of K Rations

A SEMINAR of industry and military representatives at the recent Quartermaster Association convention in Atlanta revealed that the "K" ration should be stored under carefully controlled temperature and humidity, according to V. O. Appel, who headed up the warehouse delegation in attendance. Temperatures of 30 to 34 F and 50-60 relative humidity were recommended.

Condensation on removal from storage of the ration package was given consideration and it was generally agreed that at proper temperatures and relative humidity, chances of deterioration were remote. In addition, Dr. J. G. Woodroof, Georgia Experiment Station, stated that condensation would be obviated if the rations were originally packed under controlled temperature and humidity.

Industry members of seminar assured military representatives that ample space could be made available for storage of a sizable volume of this commodity at the recommended temperature and humidity.

The Part of Warehousing in Distribution Costs

A DISCUSSION of warehousing and its part in distribution costs was presented by J. Leo Cook, J. Leo Cooke Warehousing Corp, Jersey City, N. J., at the 24th annual Boston conference on distribution.

Mr. Cooke pointed out that warehousing is not only essential but it is a highly specialized service, providing a link between the producer, manufacturer, distributor and the consumer. He said that while it is true that some producers and manufacturers have established company-owned warehouses in major distribution centers, the majority are using public warehouses to maintain spot stocks. The majority are doing this because the cost of public warehousing from a distribution standpoint has proved less expensive.

Continental Freezers Announces Changes

CONTINENTAL Freezers of Illinois, Inc., has announced the resignation of Thomas L. Gould as treasurer and director and the appointment of Jack L. Hemery as his successor. Mr. Gould will devote his entire attention to the expanded operation of Lafayette Foods, Inc., of Lafayette, Ind. K. F. Stepleton has resigned as president and director of Continental Freezers, Inc., Lafayette, Ind., to devote full time to the Presidency of Continental Freezers of Illinois, Inc., Chicago.

OPS Denies De-Control Of Warehousing Industry

REQUEST for decontrol of the commercial warehouse industry,, made by the American Warehousemens Association has been denied by Office of Price Administrator Tighe. This information was conveyed by the following letter to J. L. Gagini, A W A President.

"This has reference to your petition dated August 27, 1952, submitted under the provisions of Price Procedural Regulation No. 1, Revision 2, in which you request decontrol of the commercial warehouse industry.

"It appears from pertinent data that you have failed to establish that the commercial warehouse industry does not enter significantly into the cost of living or into business costs, or that control of the commercial warehouse industry involves administrative difficulties which are disproportionate in relation to the effectiveness of the control or the contribution to the price stabilization program.

"It is therefore our considered opinion that your industry does not meet the Office of Price Stabilization standards for decontrol at this time, and your petition is hereby denied."

Packaging Research In England

AN INFORMATIVE outline of the research program of Patra (Packaging Division, Printing, Packaging and Allied Trades Research Association), Randalls Road, Leatherhead, Surrey, England, is contained in Activities Report (July, 1952), QM Food and Container Institute, Chicago. The program covers strength and performance, moisture- and grease-proofness, gas penetration, effects of temperature and light, prevention of attack by insects and molds.

In addition, it attacks important problems of a specific nature—the need for a simple device to be included in a package to record number and intensity of shocks—a simple device for measurement of moisture-vapor penetration, and standard measurements of other factors in package performance. Undoubtedly, these research directions are leading toward more exact knowledge of what we have sometimes called "warehousability" of packages and cases. It is obvious that much progress is being made; it is apparent also that progress will be facilitated if some of the measuring devices mentioned above can be perfected.—TRRF Information Bulletin.

Frick Company Enters Second Century

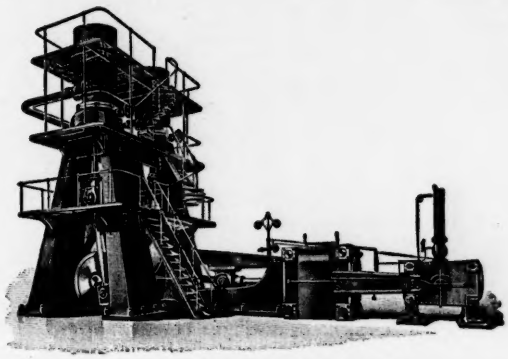
HE STARTED as a millwright in the 1840's, then built steam engines and threshers, and by the 1870's was making sawmills. His little shop in the Cumberland Valley of Pennsylvania was ten miles from a railroad; his sons got up at 3:30 a.m. to feed the horses required for hauling.

His new portable farm engines were earning a good reputation when disaster struck. His partner died of typhoid; his whole family contracted the disease, and he lost his eldest son. Meanwhile the Panic of 1873 ruined his business.

A group of thirteen men, one of whom was a younger son, then raised $34,000 to save the enterprise. By 1884 his company had grown into a net worth of $900,000, and was building the refrigerating machines which doubled its market.

Such were the early experiences of George Frick, whose firm is about to celebrate its 100th Anniversary. Today Frick Company, of Waynesboro, Pa., is internationally known for its refrigerating and air conditioning equipment, as well as for power farming and sawmill machinery.

When members of the family came to America from the Frick Valley of Switzerland, it is said they brought records of unbroken lineage dating back to the year 1113. In 1733 Jacob Frick purchased from the heirs of William Penn a 500-acre farm in Lancaster County. George Frick, his great-great-grandson, was born there in 1826.



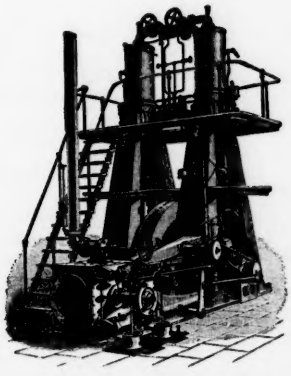
In 1896 the world's largest refrigerating machine was shipped to Armour & Co., at Kansas City. With a 48-inch stroke, it stood over thirty feet high; the tandem-compound engine extended fifty feet.

In those days, farm work was done either by hand or with animal power. Industrial plants such as woolen and paper mills, furnaces, forges, sawmills, tanneries, distilleries, and flour mills were built along the streams to take advantage of water power. There were no railroads, and but few highways crossed the Alleghenies; Lewis and Clark had completed their expedition to Oregon only twenty years before.

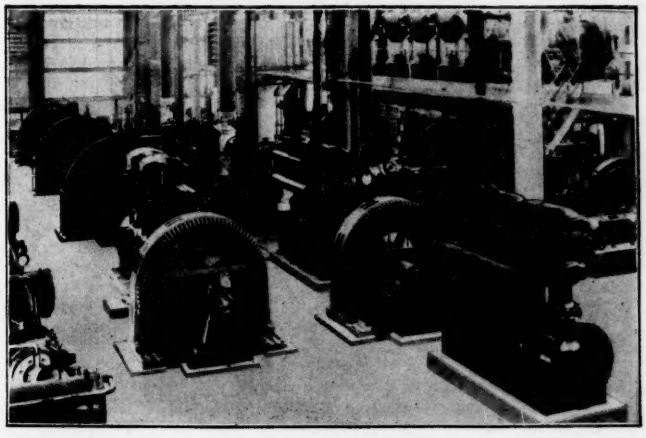
When George Frick was nine years old his family crossed the Blue Ridge and settled near Waynesboro. Beginning when he was seventeen, George learned the millwright trade. In 1848 he started manufacturing grain cleaners, horsepowers, and machinery for the mills along the streams. Having noticed that water power was becoming less dependable, as the forests were cleared, he began in 1850 to build steam engines. In 1853 he established Frick Company.

Early Business Records

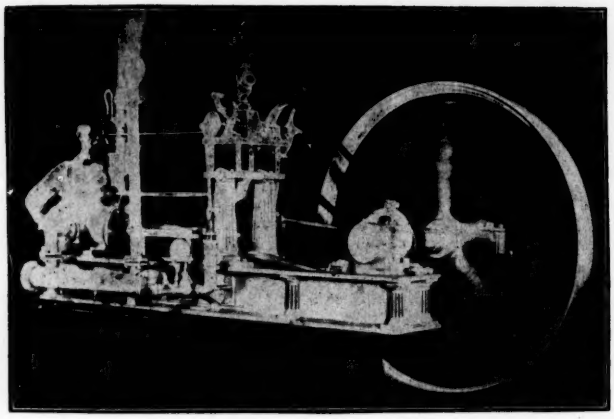
Many of George Frick's early business papers have been preserved. They show that he began advertising in 1849. Old invoices list the ancient Spanish silver coin called a "picayune" or "fippenny bit", which was



This open-type ammonia compressor with Corliss-engine drive remained the standard of the refrigerating industry for thirty years. Some of these machines ran 60 years.



The Celanese Corporation uses 6420 horsepower of Frick refrigeration in its plant near Cumberland, Md. New vertical compressors have motors of 1250 hp. Air conditioning is done with 0.76 hp per ton of refrigeration.



This steam engine built by Frick in 1856 is now in the Edison Institute at Dearborn, Mich., and can still be operated.

worth 6¼ cents; two of these made a bit. By 1850 he was cashing checks for his customers, in the absence of banks. After 1860 he found some Southern customers unwilling to accept paper money printed by the banks in the North. One man wrote, "Please send me $10 of Maryland money"! George Frick's business was operated successfully for 30 years without the benefit of a railroad. Located midway between the battles of Antietam and Gettysburg, the area was frequently raided; Confederate soldiers once took all the belting from the plant for shoe leather.

Farm Engine

In the 1860's George Frick developed a boiler and engine mounted on wheels. This outfit, known as a farm engine, furnished the first portable mechanical power that could be adapted to such needs as threshing, sawmilling, and other belt-driven loads. In the late 1870's the engine was connected to the rear wheels by a chain drive, to form one of the early "road locomotives".

In 1880 a Frick engine won first award over 25 competitors at the exhibition in Melbourne, Australia. An improved traction engine called the "Daniel Boone", introduced in 1885, took 39 first premiums at the state and county fairs that year.

By this time the plains of the West had been opened and a great demand for farm and traction engines had arisen. Threshers and sawmills were also selling fast. The firm erected a big new plant at Waynesboro: this was described in the "Scientific American" of 1883 as one of the finest anywhere.

The Company now (1882) began the work with refrigerating machinery which made it a pioneer in this field. About the same time it launched into the building of Corliss steam engines, in sizes up to 3000 horsepower. By 1886 packing houses, breweries, and ice plants were installing the new open-type Frick Ammonia compressors, driven by Corliss engines. It was nothing unusual for these machines to be operated day and night, continuously, for 40 years; others ran more than 50 years, and some even 60!

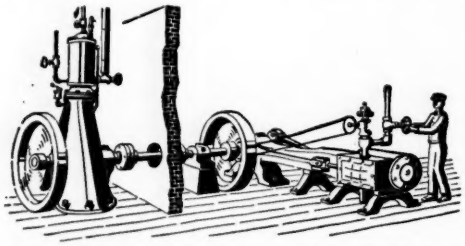
First 100 Ton Ice Plant

The first 100-ton ice plant in America was installed at New Orleans in 1888. The ice was formed in huge sheets, each weighing about five tons, and requiring a week to freeze. That same year a large Frick Corliss engine, with a 36-in. stroke, was shipped to North Carolina, where it is operating to this day.

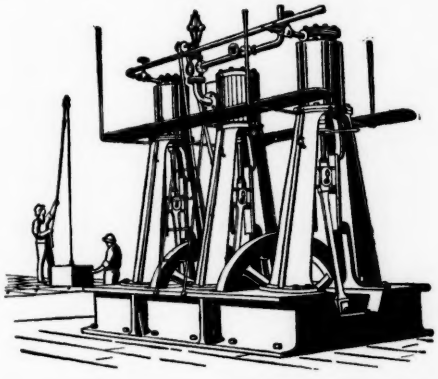
The largest Frick compressor ever constructed was sold to Armour & Company in 1896. The parts of this compressor and compound Corliss engine required an entire train of 15 cars for the haul to Kansas City. This giant machine was in continuous service for 35 years, and in occasional use another five. Though it was driven at only 50 to 60 revolutions per minute, the compressor was rated at 350 tons of refrigeration.

In 1911 horizontal ammonia compressors were added to the Frick line, and in the 1920's these were developed into a medium-speed machine known as Type J. A notable installation of the new compressors was made for the Celanese Corporation of America near Cumberland, Md., where they are still running alongside modern enclosed ammonia machines. This plant has operated with great economy; air conditioning work is done with only 0.70 horsepower per ton of refrigeration. This figure is the total electrical input to the motors.

In 1923, a greatly improved method of making clear ice from average city water was introduced. This was called the Frick Pendulum or F-P System, from the motion of



The first Frick refrigerating machine (1882) had an ammonia cylinder mounted on a vertical engine frame and was driven by a horizontal steam engine.



(Right) This complete 25-ton compressor (1883) had two ammonia cylinders with a steam engine between them.

the air tubes in the ice cans. Expensive equipment for compressing the air and dehydrating it were made unnecessary by this simple system, which worked at a pressure of two pounds or less. Within a few years more than a thousand installations of the F-P System had been made.

Power Farming Machinery

The steam traction engine reached the zenith of its popularity about 1915. For some years Frick Company then built its own gas tractors, and later took on the Minneapolis-Moline line. Along with the new steel threshers, the Company began offering a full selection of power farming machinery, which today includes combines, balers, forage harvesters, feed mills, land rollers, husker-shredders, combines, etc. In the late 1930's Frick engineers developed a steel peanut picker, which was the first on the market. This was equipped with rubber bearings at the wristpins, no other kind being able to resist the grit and dust encountered in handling peanuts. The success of these machines led to the building of the peanut combines introduced last year.

Air Conditioning

In the 1920's air conditioning began to share with various kinds of industrial work the attention which refrigerating engineers had formerly lavished on ice making systems and the food industries. One of the early Frick air conditioning systems had been installed in 1910 in a candy factory in Lancaster, Pa. Printing houses and chemical plants were among the first to discover the advantages of air conditioning, outside of the theatres, restaurants, and stores which installed it for human comfort. Today Frick Company offers several patented air conditioning systems of the central type, in addition to its line of unit conditioners.

Quick-Freezing

The 1930's saw tremendous progress in quick-freezing practice, and a further widening of the uses of refrigeration in general. The world's largest quick-freezing system—Seabrook Farms at Bridgeton, N. J.—uses over 6000 horsepower of Frick refrigeration; this operates on the booster or two-stage system, which had earlier been developed by Frick engineers as a means of producing low temperatures with economy. Wide-awake ice plants were similarly developed into where any cooling need could be met, whether quick-freezing, lockers, cold storage, ice making, pipe-line service, or special work.

In this same decade Freon refrigeration took its place alongside the traditional ammonia system. This equipment superseded the carbon-dioxide machines and aided in opening a new day in both air conditioning and small commercial work.

World War I was the first great struggle in which the importance of refrigeration was realized. In World War II, thousands of refrigerating systems were needed for use aboard ship, in camps, in test laboratories, chemical works, ice plants, powder mills, cold storages, etc., etc. The Frick factory worked night and day to do its part. A huge test laboratory was designed and built for the Army Engineers at Fort Belvoir, Va., where it is still in operation. Numerous other test laboratories are now maintaining temperatures as low as minus 100 F for such important companies as Bendix Radio, RCA Victor, Lycoming Motors, Goodyear Aircraft, and others.

Outstanding engineering feats of the post-war period include the high-humidity cold storages which keep foods fresh without loss of weight (in spite of 32-degree temperatures) and the heat-pump systems used in evaporating orange juice before it is frozen. The Lake Wales plant of the Florida Citrus Canners Association uses 3180 horsepower of compressors on this latter service.

The latest Frick achievement of national importance is a new method of cooling the reactors in which synthetic rubber is formed. Sets of vertical direct-expansion coils, under automatic control, now cool the butadiene, styrene and other chemicals so effectively that twice as much "cold" rubber can be made in the same time as previously.

Indianapolis Section A.S.R.E.

THE Indianapolis Chapter of the American Society of Refrigerating Engineers visited the Purdue University campus recently, the purpose of the trip being to inspect the laboratories and find out what the university is doing in the field of refrigeration and air conditioning.

The program, arranged by Prof. H. G. Venemann included a dinner in the East Faculty lounge of the Union Building at which Prof. Harry L. Solberg head of the school of Mechanical Engineering spoke to the group. The visitors then inspected the shops and laboratories.

A number of short talks on refrigeration were given by members of the Purdue staff, Prof. William E. Fontaine, Prof. Venemann, and Prof. William L. Sibbitt. A visit was made to Continental Freezers, Lafayette for a tour conducted by Elmer Fox and Prof. William L. Sibbitt. The meeting was open to the public.

Los Angeles Joint Meeting NAPRE and RSES

(Continued from page 50)

In extemporaneous remarks on controls, Mr. Baker said that the progress which has been made in the past few years in refrigeration controls is attested by the fact that service calls in the field have dropped 80 per cent in the last two or three years. This is due, he said, not so much to startlingly better or sturdier values that are being produced by the manufacturers, but the change can be traced to the educational meets being held by groups such as the one he was addressing.

"At meetings such as these," Mr. Baker remarked, 'to which refrigeration engineers devote an evening once or twice a month, they learn about every detail and the components and construction of controls and valves and thereby are able to adjust, correct and repair matters without shipping the unit back to the factory or sending out a hurry-up call for a service man. There was a time, not too long ago, when a refrigeration man would ship a valve back just as soon as something seemed to be wrong with it. . . . Why? . . . Because he lacked the necessary skill and knowledge to tackle it himself. But things have changed. This change means that somebody is getting educated about controls, which is a healthy situation and a profitable one for you engineers as well as for the companies for which you work."

Mr. Baker declared that there have been notable changes and improvements in control design and construction during the past decade. Only a few years ago, he pointed out, valves were, in the main, large, cumbersome affairs. The trend now, he said, is toward supplying the refrigeration industry with lighter weight controls of streamlined, less cumbersome design, yet without sacrificing strength, sturdiness and efficiency of operation.

At the conclusion of Mr. Baker's remarks, the meeting was thrown open for a question-and-answer period, for which Messrs. Grace and Robertson served as the targets.

In closing the conference, Presidents Williams and Marrs of the respective associations expressed the opinions that the success of this first dual session was inspiration enough to warrant the R.S.E.S. and the N.A.P.R.E. to get together in more frequent joint meetings in the future for the mutual education of the respective memberships. With N.A.P.R.E. nomination and program committees for 1953 ready to go into action in November, it is regarded as probable that the 1953 N.A.P.R.E. meeting schedule will be arranged to include one or more joint sessions with the other local chapters of refrigeration societies.

New Canadian Company To Produce Dry Ice

A NEW industry for British Columbia is in prospect with the offering of 200,000 Class A common shares, par $1.00 of Gas-Ice Corp. (Canada) Ltd., at $1.00 a share, by M. C. McLeod & Co., Calgary, Alta. Incorporated December 29, 1949, Gas-Ice Corp (Canada) Ltd., Vancouver, B. C., was formed to manufacture dry ice from natural carbon dioxide from pools existing in British Columbia. It plans to take natural carbon dioxide, pipe it into a processing plant and, by passing it through three stages of compression and one cycle of refrigeration, produce a liquid with a temperature of 40 deg. below zero F. A further step would exhaust the liquid into snow which, when pressed into a solid block under high pressure would produce gas ice with a temperature of 110 deg. below zero F.

The company has acquired the following property rights and assets: Exclusive manufacturing and sales rights for products relating to an improved method of dry ice refrigeration; the pilot models of certain refrigeration units, certain blueprints, plans and other information pertaining to dry ice refrigeration and the manufacture of dry ice and equipment; twenty-year lease of certain lands, near Kaslo, B. C., including carbon dioxide gas rights; miscellaneous equipment and machinery at Kaslo, B. C.

The company has applied for a carbon dioxide permit from the Crown on lands near Mara Lake, B. C. Out of the proceeds of the stock sale, a drilling and development program and a dry ice producing plant will be completed.

CONVENTION CALENDAR

MISSOURI VALLEY ICE MANUFACTURERS' ASSOCIATION
January 12-13, 1953
Hotel President, Kansas City, Mo.
V. R. ESPHORST, Secy.-treas.

KANSAS ASSOCIATION OF ICE INDUSTRIES
January 12-13, 1953
Hotel President, Kansas City, Mo.
MATT SCHERER, SR., Secretary

FACT FINDING CONFERENCE
February 14-17, 1953
Kansas City, Mo.
CLIFF D. CARPENTER, Pres.

GEORGIA ICE MANUFACTURERS ASSOCIATION
February 24-25, 1953
Ansley Hotel, Atlanta, Ga.
RICHARD H. FLORRID, Secretary

SOUTHERN ICE EXCHANGE
February 24-25, 1953
Ansley Hotel, Atlanta, Ga.
RICHARD H. FLORRID, Secretary

ALL-INDUSTRY FROZEN FOODS CONVENTION
March 1-4, 1953
Conrad Hilton Hotel, Chicago, Ill.

NORTH CAROLINA ICE ASSOCIATION
March 9-10, 1953
Robert E. Lee Hotel, Winston Salem, N. C.
LEWIS POWELL, Secretary

NORTHWEST ASSOCIATION OF ICE INDUSTRIES
March 25-27, 1953
Empress Hotel, Victoria, B. C.
L. F. MARSH, Exec.-secy.

ASSOCIATION DIRECTORY

AMERICAN INSTITUTE OF REFRIGERATION
H. T. McDermott, Gen. Secretary, 433 N. Waller, Chicago 44, Ill.

NATIONAL ASSOCIATION OF ICE INDUSTRIES
Guy W. Jacobs, Secy., 1706 L St., N. W., Washington 6, D. C.

NATIONAL ASSOCIATION OF REFRIGERATED WAREHOUSES
Wm. Dalton, Exec. Vice-Pres. Tower Bldg., Washington 5, D. C.

NATIONAL ASSOCIATION OF PRACTICAL REFRIGERATING ENGINEERS
J. Richard Kelahan, Secretary, 435 N. Waller Ave., Chicago 41, Ill.

CALIFORNIA ASSOCIATION OF ICE INDUSTRIES
Jack L. Dawson, Secretary
461 Market St., San Francisco, Calif.

CANADIAN ASSOCIATION OF ICE INDUSTRIES, INC.
Mrs. Mildred E. Croft, Executive Secretary
378 Eglinton Ave., E. Toronto 12, Canada

DELTA STATES ICE ASSOCIATION
R. N. Milling, Secretary
Ouachita Bank Bldg., Monroe, La.

EASTERN STATES ICE ASSOCIATION
R. H. Wilson, Secretary-treasurer
Delavan Ave. & Spruce St., Philadelphia, Pa.

FLORIDA ICE ASSOCIATION
Muriel Washburn, Secretary
1926 Silver St., Jacksonville, Fla.

GREAT LAKES CHAPTER, N.A.R.W.
Harry Foster, chairman
Cincinnati Terminal Warehouses, Inc.
Cincinnati, Ohio

ILLINOIS ASSOCIATION OF ICE INDUSTRIES
W. D. Wright, Secretary
Clinton Pure Ice Co., Clinton, Ill.

INDIANA ASSOCIATION OF ICE INDUSTRIES
Robert W. Walton, Secretary
Board of Trade Bldg., Indianapolis, Ind.

KANSAS ASSOCIATION OF ICE INDUSTRIES
Matt Scherer, Secretary
McPherson Ice Company,
McPherson, Kansas

KENTUCKY ICE MANUFACTURERS ASSOCIATION
R. T. King, Secretary
217 E. Main St., Louisville 2, Ky.

MICHIGAN ICE INDUSTRIES ASSOCIATION
Edward W. Jackson, Secretary
131 E. Kalamazoo Ave., Kalamazoo, Mich.

MISSOURI VALLEY CHAPTER, N.A.R.W.
H. A. Steinmeyer, chairman
Booth Cold Storage Co., St. Louis, Mo.

MISSOURI VALLEY ICE MANUFACTURERS' ASSN.
V. A. Esphorst, Secretary
3820 Washington St., St. Louis, Mo.

MOUNTAIN STATES ASS'N OF ICE INDUSTRIES
J. R. Espy, Secretary
Espy Ice Co., 2101-31st St., Denver 5, Colo.

NEBRASKA ASSOCIATION OF ICE INDUSTRIES
Frank Vogelsang, Secretary
W. T. Good Ice Co., Lincoln, Nebr.

NEW ENGLAND ICE ASSOCIATION
Raymond Wilber, Secretary
83 Winter St., Providence, R. I.

NEW JERSEY STATE ASSN., N.A.R.W.
Leo J. Fisher, president
Harborside Warehouse Co. Inc.
Jersey City, N. J.

NEW YORK STATE ASS'N REF. WAREHOUSES
Garth A. Shoemaker, president
Hygeia Refrigerating Co., Elmira, N. Y.

NORTH ATLANTIC CHAPTER, N.A.R.W.
Jerry Johnson, Chairman
Terminal Refrigerating & Warehousing Corp.
Washington, D. C.

NORTH CAROLINA ICE ASSOCIATION
Lewis H. Powell, Secretary
Capital Ice & Coal Co., Raleigh, N. C.

NORTH PACIFIC CHAPTER, N.A.R.W.
E. F. Swanberg, chairman
Diamond Ice & Storage Co.,
Seattle, Wash.

NORTHWEST ASSOCIATION OF ICE INDUSTRIES
L. F. Marsh, Secretary
1539 N. E. 37th Ave., Portland, Ore.

OHIO ASSOCIATION OF ICE INDUSTRIES
Elizabeth Shannon, Acting Secy.-Treas.
The Steubenville Ice Co., Steubenville, O.

OKLAHOMA ASSOCIATION OF ICE INDUSTRIES
Harry T. Hudson, Executive Secretary
525 Cravens Building 7, Oklahoma City, Okla.

PACIFIC STATES COLD STORAGE WAREHOUSEMEN'S ASSOCIATION
Jack L. Dawson, Secretary
461 Market St., San Francisco, Calif.

SOUTH CAROLINA ICE MANUFACTURERS ASS'N
Geo. L. English, Secretary
P. O. Box 603, Columbia, S. C.

SOUTH PACIFIC CHAPTER, N.A.R.W.
M. W. Young, Chairman
National Ice & Cold Storage Co.,
San Francisco, Calif.

SOUTHERN ICE EXCHANGE
Richard W. Florrid, Secretary
11½ Forsyth St. N. W., Atlanta, Ga.

SOUTHEASTERN CHAPTER, N.A.R.W.
W. B. Haggerty, Chairman
Tampa Cold Storage & Warehouse Corp.
Tampa, Fla.

SOUTHWESTERN CHAPTER, N.A.R.W.
C. P. Metcalf, chairman
Southwestern Ice & Cold Storage Co.,
Austin, Tex.

SOUTHWESTERN ICE MANUFACTURERS ASS'N
P. A. Weatherred, Secy. Counsel,
Mercantile Bank Bldg., Dallas, Tex.

TENNESSEE ICE MANUFACTURERS ASSOCIATION
W. E. Harlan, Secretary
Mt. Pleasant Ice Co., Mt. Pleasant, Tenn.

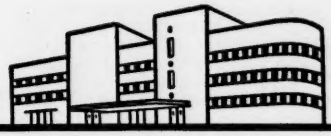
TRI-STATE ASSOCIATION OF ICE INDUSTRIES
L. R. Girton, Secretary
260 Boyce-Greeley Bldg., Sioux Falls, S. D.

VIRGINIA ICE MANUFACTURERS ASSOCIATION
H. H. Snyder, Secretary
Alexandria, Va.

WEST VIRGINIA ASSOCIATION OF ICE INDUSTRIES
E. Dana Smith, Secretary
Diamond Ice & Coal Co., Charleston, W. Va.

WISCONSIN ASSOCIATION OF ICE INDUSTRIES
Paul F. Hoff, Secretary
1300 East Locust St., Milwaukee, Wis.

NEW PLANTS and IMPROVEMENTS



This Department each month presents the more important developments covering new constructions, as well as additions, improvements, remodeling, and installations of new equipment in ice and cold storage plants and other industrial plants that use refrigeration. News notes on all such new constructions and improvements are invited.

California

Oakland, Calif.—Rich Plan, a frozen foods concern, has announced completion of a large refrigerated storage warehouse.

Ontario, Calif. — A cold storage warehouse, estimated to cost $150,000 is under construction at the Ontario Frozen Food Company plant.

San Jose, Calif.—The Modern Ice & Cold Storage Company is converting some coolers to freezers and is increasing its freezer tunnel capacity to 100 tons a day.

District of Columbia

Washington, D. C.—Bids have been received by the Central Purchasing Bureau of the Indonesian Government for a 25-30 ton ice making plant including assembly and installation and a deep freeze cold storage plant including installation. The plants are for the Fisheries Service in Pasar Ikan Djakarta and Aer Tembage, North Celebes.

Georgia

Savannah, Ga. — A refrigerated storage warehouse to cost $1,168,068 will be built at the State Port by the Georgia Refrigerated Warehouses Inc. which has been granted a certificate of necessity by the Defense Production Administration.

Maryland

Baltimore, Md.—A new warehouse-office building has been opened here by Carpel, Inc. More than half of the 20,000 square feet of warehouse space will be used to hold frozen foods, according to Chas. J. MacGarvey, president.

New York

Geneva, N. Y.—Construction of a new building will enable the Geneva Refrigerating Corp. to freeze 28 tons of fruit daily in 30-lb. tins, according to W. W. Black, vice-president. The expansion includes installation of a new booster compressor 13.25 x 10.5 which will be operated in conjunction with a 12 x 12 compressor and a 74-ton evaporative compressor. Total cost will amount to about $68,000.

Wilson, N. Y.—The Wilson Cold Storage Company has replaced its ammonia direct expansion system with a new automatic air circulating refrigerating system.

Mississippi

Gulfport, Miss. — The Merchants Company held a formal opening of the newly occupied freezing and cold storage plant at Gulfport Field.

Oklahoma

Oklahoma City, Okla.—The Oklahoma Cold Storage Inc. has been formed to operate a remodeled brewery unit as a refrigerated warehouse with capacity of 3,500 tons. John L. Baer is president of the company and W. Jay Cox, former superintendent of Kansas Cold Storage Company will be general manager of the Oklahoma City plant.

Tennessee

Jackson, Tenn.—The Beare Ice & Coal Company has added one million pounds of storage capacity, with 300,000 pounds added at its Milan plant by converting an ice storage and 700,000 pounds at its Humboldt plant, to be in operation about January 1.

Texas

Aransas Pass, Tex.—An expansion program costing $50,000 will add to the facilities for freezing and zero storage for the Coastal Freezing Plant.

San Antonio, Tex.—The Merchants Ice & Cold Storage Company has in operation a new single story freezer warehouse with approximately 300,000 cubic feet of freezer space.

Waco, Tex.—The Geyser Ice Company is converting two cooler rooms to freezers. Blower type units are being installed.

Fire and Accident Record

Louisville, Ky.—Fire caused damage estimated at more than $5,000 to the Parkland Ice & Coal Company. Most of the damage was confined to machinery.

Bartlesville, Okla.—Fire completely destroyed the Crystal Ice and Frozen Food Company ice plant with damage estimated at more than $100,000.00. All freezing coils and five trucks were destroyed.

LaGrande, Ore.—The main plant of the Eldridge Packing Company, one of the largest packing plants in Eastern Oregon, was destroyed in a spectacular fire with loss of $100,000.

Sales and Reorganizations

Chicago, Ill.—The City Products Company has announced purchase of the Franklin Brewing Company, Columbus, Ohio. Don L. Hines, former secretary and operating head of Franklin has been named president and Walter A. Franz of City Products brewing division has been elected vice-president.

Anderson, Ind.—The White Frost Ice Company Inc. has sold its interest in the Anderson Ice Company, which was organized in 1947 by the Polar Ice & Fuel Company and the White Frost concern for the purpose of delivering ice to wholesale and retail customers. General offices of the Anderson Ice Company will be moved to the Polar Ice & Fuel plant and delivery service will be maintained as usual under supervision of Herbert Atkinson, manager.

Oakland City, Ind.—John R. Jones has sold his ice plant, operating as the John H. Jones Sons, to Garland Rosenbury, Petersburg, Ind.

Jackson, Mich.—The ice business and delivery equipment of Dunigan Brothers has been purchased by Lyle Lewis. Deliveries and cash and carry sales will be continued with ice brought in from Lansing.

Marshall, Tex.—The Pure Ice Company, Marshall, Texas, has been purchased by J. B. Hayes, Sr. and J. B. Hayes, Jr., owners of the Southwest Ice Company. The Messrs. Hayes own and operate the Independent Ice Company in Longview and have owned the Southwest Ice Company since 1946.

Seattle, Wash.—The National Cranberry Association has announced the purchase of a freezer and storage plant at Centralia, Wash., to process cranberries grown on the west coast. The Centralia plant has a special quick freezing unit with capacities of 1,200 to 1,500 barrels of cranberries per day with storage capacity of 11,000 barrels.

Icy Items

Boston, Mass. — The Executive Council has approved a state public works department contract leasing an ice making plant to the Boston Garden Arena Corporation for $5,000 a year for three years.

Mt. Vernon, Ind.—After 51 years of continuous existence, the Consumers Ice & Cold Storage Company, one of Mt. Vernon's oldest industrial concerns, has ceased operations and will be dissolved as a corporation. W. R. Fentress, Evansville, will take over the delivery routes handled by the Mt. Vernon concern and will haul ice by refrigerated truck from Evansville. The plant will be dismantled and the building and site offered for sale.

DEATHS

Floyd M. Shoemaker

THE death of Floyd M. Shoemaker, prime mover in the founding of the Hygeia Refrigerating Company, Elmira, N. Y., in 1896 and its active head for many years, occurred October 31 after an extended illness. He was 80.

Mr. Shoemaker and his father-in-law, Clay W. Holmes were the chief organizers of the company, which has been family owned and operated for almost 57 years. Others actively interested were his father and oldest brother, Guy W. Shoemaker. The early officers were Clay W. Holmes, president; Floyd M. Shoemaker, vice-president and general manager, Guy W. Shoemaker, treasurer; James N. Ward, secretary. Guy Shoemaker retired from the company in January, 1906 and he was succeeded by J. R. Shoemaker, present president. Floyd Shoemaker retired from active participation in company affairs in the early Twenties, and control of the company passed into the hands of J. R. Shoemaker in 1930. One of Floyd's sons, Guy S. Shoemaker, is a member of the present board of directors.

He was one of the early members of the Cold Storage Division of the American Warehousemens' Association, now known as the National Association of Refrigerated Warehouses. In 1913 he was a prime mover in the organization of the New York State Cold Storage Association and served as its president for many years. It was his influence that brought together dissident members of the industry throughout the state and welded them into an organization that next year will mark its 40th anniversary. During these years much has been accomplished in the interests of the industry throughout the state. Although retired from active participation for many years, he has always retained a keen interest in the refrigerated warehousing industry.

During World War I he went to Washington and served under former President Hoover in the Food Administration. His first business connection was with the Second National Bank of Elmira. He later served with the Standard Oil Company before helping to organize the Hygeia company.

Upon the death of his father-in-law, he left Hygeia and became president of the Frostilla Company. He continued to direct Frostilla company operations until his retirement because of ill health some ten years ago. He was a charter member and vice-president of the Employee's Mutual Insurance Company of New York which was organized about 1911 when the Workmen's Compensation Law took effect. He served as vice-president until the company merged with Utica Mutual Life Insurance Company several years ago. He was also a director of the Chemung Valley Savings and Loan Association and a member of the Board of Managers of the Arnot-Ogden hospital. He was a member of the Park church and of Ivy Lodge F & A M, Elmira.

Crawford Goodman Timberlake

THE death of Crawford Goodman Timberlake, president of the Hartsville Ice and Fuel Company and the Florence Nehi Botting Company, occurred at his home in Hartsville, S. C., November 17. He was 69.

Mr. Timberlake was also vice-president of the Cokar College, vice-president of the Hartsville Die Works and the Bank of Hartsville. In 1921 he and his associates organized the Hartsville Ice and Fuel Company, of which he was manager until 1941 when he became president. He had been prominent in city, county and state affairs, having served as Hartsville City Councilman and on the County Commission, director of the Hartsville Chamber of Commerce and the South Carolina Chamber of Commerce. He was a member of the First Baptist Church.

He is survived by his widow, Mrs. Anna Lee Lawton Timberlake.

Robert W. Croker

THE death of Robert W. Croker, City Products Corp., Cleveland, Ohio, occurred October 1, after a short illness. Mr. Croker had been associated with the ice industry for many years and at the time of his death was an officer of the City Products Corp. He was a member and had served as a member of the Research Committee of the Ohio Association of Ice Industries, also as vice-president.

MARTIN LARSEN, general manager and director of the Atlantic States Warehouse and Cold Storage Corp., Springfield, Mass., since 1931, died November 3. He was 58. Mr. Larsen was a graduate of Worcester Polytechnic Institute. He was a director of the Massachusetts City Realty Company and Chairman of the Warehouse and Storage Division of the New England Shippers Advisory Board. Survivors include his widow, Mrs. Ivy Larsen, two sons and five daughters.

MARTIN ABRAHAMSON, Ludington, Mich., retired president of The Abrahamson Neirheim Company which operates the Cola lumber and ice plant, died October 20. Mr. Abrahamson was a member of the Board of Trustees of Bethany Methodist Church and was Sunday School Superintendent for 20 years. He was 71.

Barney Giddens

THE death of Barney Giddens, founder of the B. T. Ice Company, Knoxville, Tenn., as announced in the November ICE AND REFRIGERATION, occurred October 10. He was 68.

Mr. Giddons came to Knoxville when a young man and traveled out of that city as a refrigerating engineer. From knowledge gained in this field he established his own ice plant in Knoxville, of which his son Hod is secretary and treasurer and another son John is chief engineer. This ice plant was known for its spotless cleanliness. The engine room had a marble floor and the original ice cans installed in 1930 are still in use and show no rust. The plant is housed in a sheet metal building, yet it has a very attractive appearance.

He was an active member of the Rotary Club, a Shriner and Scottish Rite Mason, and a member of the Baptist Church. He is survived by his widow, Mrs. Inez McCarty Giddens, two sons and three daughters, all of Knoxville.

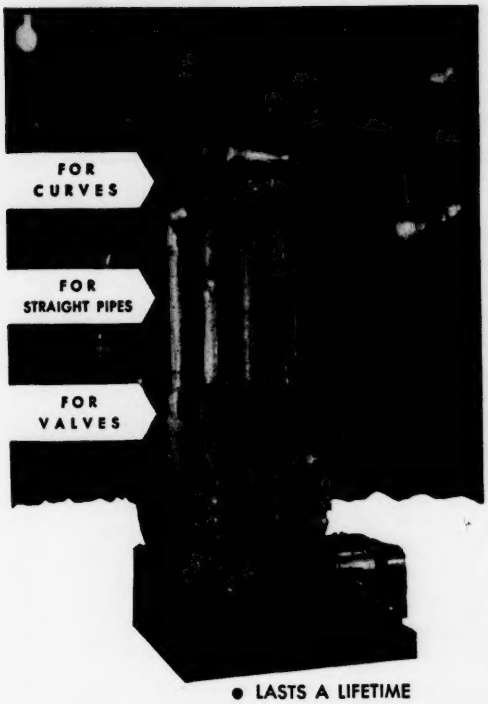
MAURICE H. BIVENS, Longview, La., co-owner of the Longview Ice Company and associated with cotton and oil companies died recently. He was 65. Mr. Bivens was a member of the Rotary Club, president of the Longview Chamber of Commerce, member of the First Methodist Church and a former member of the school board, also prominent in Masonic circles. He is survived by two sons.

CHARLES B. WINN, a retired Philadelphia ice dealer, North Wilwood, Pa., died November 4. in Burdette Tomlin Memorial Hospital, Cape May Court House. He was 69. He is survived by his widow, Mrs. Laura Winn, and a son, Charles, Jr.

O. M. TUCKER, prominent business man, and former operator of an ice plant in Scottsville, Ky., died October 17. He took an active part in civic affairs of the city. He was a charter member of the Scottsville Rotary Club and Scottsville Golf Club and County Club Association. He leaves his widow, Mrs. Adeline Pitchford Tucker, and two daughters.

MERTON KINNEY PICKETT of the Pickett Ice Company, Newton, New Jersey, died November 3, after a long illness. He was 79. Born in Lawton, Pa., Mr. Pickett came to Newton in 1927. In 1928 he founded the ice company, which is now owned and operated by his daughter, Mrs. Helen F. Cornwell. He was a member of the Balesville Christian Church.

DIEDERICH OBERDIECK, retired coal and ice dealer, Jersey City, N. J., died November 15. He was 84. Born in Germany he had lived in Jersey City for 40 years. He is survived by a daughter, Miss Louise Oberdieck.



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OZITE All-Hair Felt has been the best insulation for the refrigeration industry for over half a century. Here's why —

. . . low conductivity provides efficient heat barrier . . . allows close temperature control . . . permits maximum capacity of refrigeration units . . . reduces power consumption . . . does not rot or pack down — resists fire.

For all of the facts about time-proven OZITE send for 4-page Bulletin No. 300.

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Mercury filled, in non-sparking brass armor. Length 5½". Ranges available from minus 50° to + 220°F. or equivalent Centigrade. In 1° or 2° divisions.

THEY'RE not only handy to carry, but easy to read too—thanks to BINOC* tubing, the optically-correct thermometer tubing. Provides a wide angle of vision and high magnification . . . the column is easily visible . . . there are no confusing bore reflections. Available in many ranges, red liquid or mercury filled.

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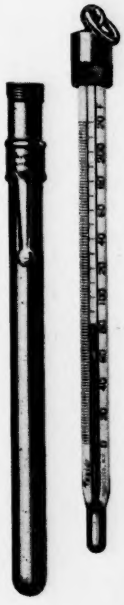
for easy, accurate testing



For full information about Taylor's complete line of precision quality laboratory instruments, as well as many other instruments especially designed for the refrigeration industry, write for **Catalog 300.** Taylor Instrument Companies, Rochester, N.Y., and Toronto, Canada.

Instruments for indicating, recording and controlling temperature, pressure, flow, liquid level, speed, density, load and humidity.

Red liquid or mercury filled, complete with metal pocket case. Just 5½" long. Made in variety of ranges and 1° or 2°F. divisions to meet all requirements.

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IN HOME AND INDUSTRY

What's New

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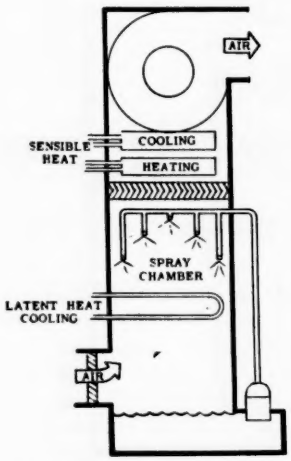
APPLIANCES • PROCESSES

Niagara Blower Announces Liquid Contact Method

THE development of an improved apparatus for the drying or moistening of atmospheric air by its new "Liquid Contact Method" is announced by the Niagara Blower Co. Air is treated to fix relative humidity and temperature independently, as separate functions, to obtain closer control of results. Filtered fresh air enters a new type of spray chamber providing especially intimate contact between air and spray liquid. The spray either adds moisture or removes it by absorption or by condensation. The condition of the spray liquid (its temperature or absorbent concentration) determines the moisture content of the air leaving the chamber. The final temperature is fixed as a separate function, either within the apparatus or external to it, thus giving trustworthy control of room conditions by means of thermostats, without the use of moisture sensitive instruments.



Flow Diagram of Apparatus for Liquid Contact Method

The spray liquid used for removing moisture may be either refrigerated water or the company's "Hygrol," a stable organic absorbent liquid (not a salt) which is automatically held at the proper concentration. When Hygrol is used the latent heat of condensation of the moisture removed may often be absorbed by evaporatively cooled water. The dew point of the air is fixed accurately and final conditions are held automatically constant or varied by either adding or removing moisture in response to changing the instrument setting.

Applications include the establishment of dry atmospheres for protection, processing or drying of moisture sensitive materials, testing materials, and conditioning of air for human welfare. In such comfort air conditioning applications the method makes possible the furnishing of large amounts of fresh dry air with the moisture removed at low cost, permitting the cooling or heating to be done economically with room conditioners of any type with superior results.

New Spiraxial Compressor

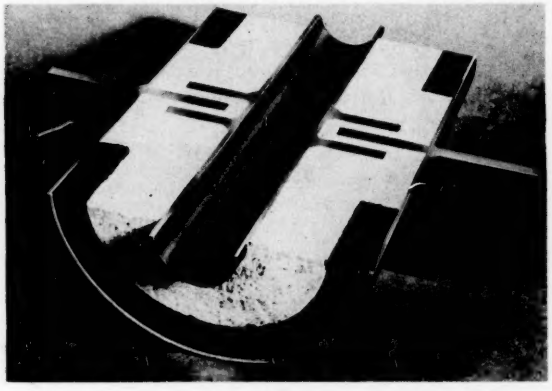
A GAS or air compressor called the "Spiraxial Compressor," entirely new in principle and design within its range, was displayed for the first time by Roots-Connersville Blower at the 1952 convention of the American Gas Association. A plastic-enclosed model of the new unit showed the functional operations of its "Spirotor" construction.

Instead of conventional rotors, the Spiraxial Compressor employs two intermeshing screw-rotors which rotate in opposite directions. These screws are operated by gears synchronized to prevent contact, allowing close but definite clearances between them. The "Spirotors" are formed along a spiral surface accurately generated to maintain correct clearances.

"The flow of air or gas is axial, with most of the compression taking place at the back of the casing," a company spokesman explained. "This allows an extremely large inlet opening, thus preventing strangulation of the inlet air and increasing the volumetric efficiency." The Spiraxial Compressor is designed to increase the flexibility of the R-C Dual-ability line by bridging the gap between the conventional Rotary Positive and Centrifugal Compressors.

Insulated Anchor Reduces Heat Loss

BASIC patents on a new type of insulated anchor for use in underground insulated pipe systems conveying hot or cold liquids or gases has been granted to the Durant Insulated Pipe Company. The anchor is so constructed that contact is eliminated between anchor plate and pipe. The plate is insulated from the pipeline both thermally and electrically by a non-compressible block of Transite sheet material. The design and material serve to minimize heat loss at anchorage points and prevent pipeline corrosion due to electrolytic action. The entire line can now be insulated from ground by taking supplementary precautions to insulate the line at the terminals. For technical details write to the company at Warren Way and Bay Road, Palo Alto, Calif.

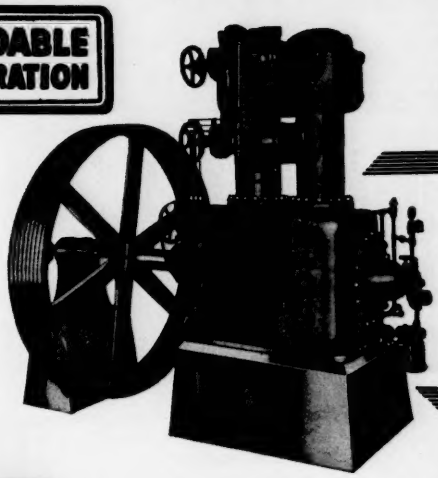


Cross Section View of Durant Patented Insulated Anchor.

Sterling DEPENDABLE REFRIGERATION

GET READY NOW FOR '53

Place your order now for any of the wide range of STERLING compressor sizes. To provide for additional capacity . . . enlarged facilities . . . altered plant lay-out, look into the STERLING line. Engineered and built with advanced operating design features for efficiency and economy, rugged in the selection of materials for endurance. STERLING ammonia compressors are the product of more than fifty years of "know how" in the manufacturing of quality refrigeration equipment.



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One of the largest cold storage plants in the world* used upwards of 50,000 gallons of LAYKOLD® products for floors, walls and roofs.

Only two men were needed to spray cold adhesives for vapor barriers and to hold insulation.

Bulk delivery and mobile spray units cut costs to a minimum.

Investigate Laykold Cement, Insulation Adhesive, and Weathercoat for "cold" jobs—large or small.

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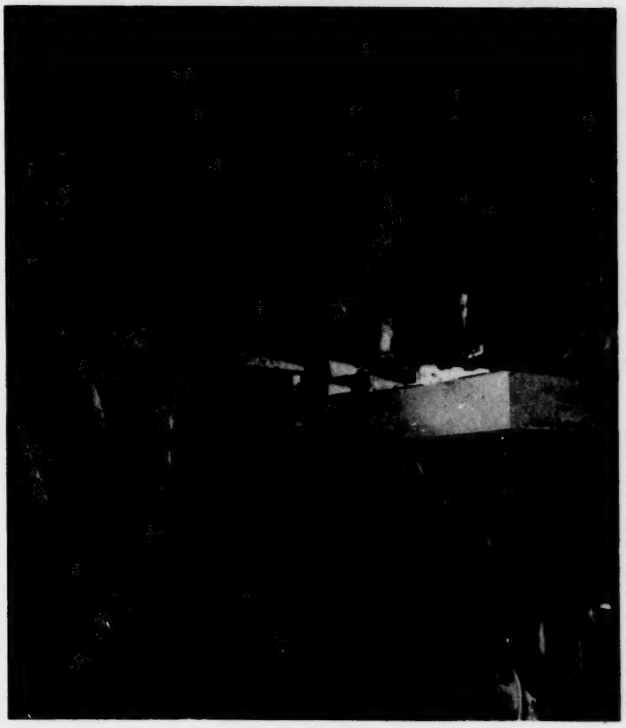

AMERICAN Bitumuls & Asphalt COMPANY

200 BUSH ST., SAN FRANCISCO 4, CALIF.

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Baltimore 3, Md. Columbus 15, Ohio, Mobile, Ala.
Tucson, Ariz. Seattle, Wash. St. Louis 17, Mo.
Baton Rouge 2, La. Inglewood, Calif.
Oakland 1, Calif. Portland 7, Ore.
Washington 6, D. C. San Juan 23, P. R.

New Rat Killer

THERE are a lot of poisons that will kill rats. They work fine, if the rats will only eat them. Rats are inquisitive, so that at least some of them will generally try a new bait when it is first set out. The trouble is, the rat colony soon learns what is causing pain and kiling them, and quits eating the poison. Furthermore, many of the rats may never take the bait at all, simply because they don't like the taste.

Koch Supplies, Kansas City 8, Mo., has developed a rat killer with an entirely new approach to the problem. This new product, named Rat Krax, is made to take advantage of natural rat tastes and feeding habits. Rodent control experts have long known that different rats like different foods. Tastes change from one section of the country to another — in the same place from one rat to another — and even in the same rat, according to where he is feeding. A rat in a packing house, for example, is less likely to eat a meat bait than the same rat in a flour mill.

Koch Rat Krax is therefore made up in six entirely different flavors and odors. The range of flavor, according to Koch, covers the main favorites of rats, hence in the six there is almost sure to be one or more that any rat will go for. Koch recommends that the six flavors be set out together, so it can be seen at once which ones go over best. The customer, when re-ordering for permanent control, may then get only the flavor or flavors that his rats ate. Each variety of Rat Krax is packed separately in a 1-lb. container, and each is readily identified by a distinctive name and label color.

The 1 lb. containers are specially made to serve as bait cans. No mixing, no hunting up pie pans, no pouring. Just remove the lid and set the container down where the rats can get to it. Containers can be closed and taken up during the hours a plant is in operation, then re-set at the end of the day. Koch also recommends Rat Krax for control of mice.

The active poison used is Warfarin, the new poison that does not cause immediate pain. It is much harder for rats and mice to identify Warfarin bait as the source of their trouble. In fact, they usually keep eating it until they are too weak to crawl up to the bait can.

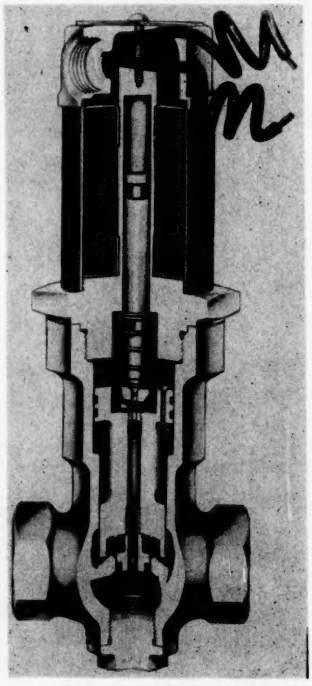
Koch has published a technical pamphlet "Rat Warfare," which describes the rat problem and gives instructions for most effective control. A copy will be sent free on request to Koch Supplies, 2520 Holmes St., Kansas City 8, Mo.

Fast Color Marking

A WATER and weather-proof marking color for efficient and economical plant operation is offered by a concern which originated overseas marking colors to meet government specifications. These colors can be applied to any type surface, wet or dry, in any weather. Stripping, cornering or stenciling, it is claimed, can be done quickly and economically using the special felt rollers, paint brush or spray gun. A complete range of 10 government approved colors is available, including black and white, for any need a plant might have, especially marking and color coding of overseas shipments. Also available are a group of transparent marking colors and a special "Block-Out-Brown" for reconditioning marked surfaces of used containers and crates. This block-out color creates a perfectly prepared surface for new markings, making for real economy in re-use of containers. In addition to these colors there are offered three unique applicators, Floquil Fountain Marker, Floquil Felt Roller and the Floquil Deckmarker. These are all precision made dispensers for exacting work. For literature write: Floquil Products, Inc., Dept. P. E., 1933 Broadway, New York 23, N. Y.

Automatic Electric Valves

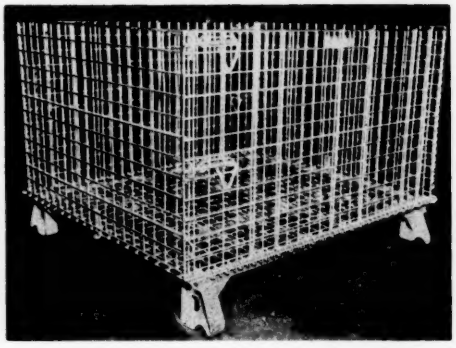
THE Atkomatic Valve Company, Indianapolis, Ind. announces that Atkomatic Solenoid Valves are now available for pressures up to 3,000 pounds per square inch. Adjustable timing on the closing stroke is available to pressures of 300 pounds per square inch. This feature eliminates shock on supply lines, particularly on hydraulic operations. The timing on the closing valve would take a maximum of 30 seconds. These valves are packless, easily maintained, and are designed to handle oil, water, steam, air, gases and any media not harmful to bronze. They are also available with explosion proof housings for use in hazardous atmospheres.



Atkomatic Solenoid Valve

New Cargotainer Designed For Small Packages

A NEW "Cargotainer," made of heavy steel wire for holding numerous small packages for storage is announced by the Pittsburgh Steel Products Company. Stacking features are combined to the four corners and center legs are eliminated, making it possible to use all types of moving equipment, including fork on platform trucks, and transporters. Metal plates are provided at each corner to resist shock from fork truck contact.

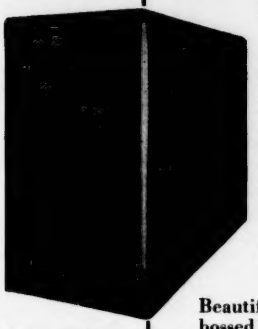


New Cargotainer Made by Pittsburgh Steel Products Company

Stacking is made easier by the four leg arrangement, so that when the two corners facing the truck operator are seated, the other two automatically fall in place. Another improvement is a simplified lock—sliding easily into locked position. It will not become dislodged under transportation or load impacts. Elimination of the runner strips formerly used makes possible a better stacking when containers are folded. It can be loaded above the top wire and still stack securely. Five folded Cargotainers occupy the space of one when it is unfolded.

BEAUTIFUL
EFFICIENT
VERSATILE

To Cut Operating Costs in ICE VENDING, Choose the NEW POLAR ICE VENDING STATION



Single unit carries 40 ten-pound bags on belt; stores 200 ten-pound bags.

Operates at the amazingly low cost of $4.00-$5.00 per month.

Compact station (3½' wide x 8' long) is easy to place.

Beautiful diamond embossed aluminum attracts customers. Requires no paint or other maintenance.

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BLOWERS WITH V-P-L

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Saves half the Engineer's Troubles ...with a Refrigeration Plant

Hundreds of engineers have been interviewed about their experience with the Niagara Aeropass Condenser. In one way or another, they say, "I wouldn't go back to anything else." And their managers, who watch the costs, say, "Best investment we ever made, couldn't operate now, without it."

Niagara Aeropass Condensers have three exclusive features which save trouble and money in running a refrigeration plant:

The "Duo-Pass"— keeps scale and salts from crusting the coils, keeps the condenser always at full capacity.

The "Oilout"— removes oil and dirt from the refrigerant, at the exact point where the oil vapor is condensed and the refrigerant is not.

The "Balanced-Wet-Bulb" control gives automatic operation at the minimum head pressure, saving power cost the year 'round!

In addition, the Niagara Aeropass Condenser saves nearly all your cost of cooling water, quickly bringing back to you the cost of installation. In plants where refrigeration is a production process, owners know that this condenser has reduced their costs.

Write for Bulletin 111.
You can see one of these installations near you.

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District Engineers in Principal Cities of U.S. and Canada

INDUSTRIAL COOLING HEATING • DRYING
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HUMIDIFYING • AIR ENGINEERING EQUIPMENT

MANUFACTURERS' NEWS

Kuenn Advanced by Owens-Corning Fiberglas

THE appointment of W. Whitney Kuenn as sales manager of the newly created Air Conditioning Products Division of Owens-Corning Fiberglas Corp. has been announced by Edward J. Detgen, sales manager of the company's General Products Division.

W. Whitney Kuenn

Mr. Kuenn has headed appliance sales for Owens-Corning since 1948. Before that he was works laboratory engineer, product development engineer and field application engineer in the appliance phase of the company's operations. He has been with the Fiberglas organization since 1943.

In his new post, Mr. Rowley will head activities relative to sales of Fiberglas products used in storage batteries, paper, liquid filtration and other industrial products.

New Products

A WATER-PROOF push-button switch for low current applications is claimed to function efficiently in temperatures from minus 65 to plus 165 F., and to withstand salt spray, shock and vibration. Made by Riverside Manufacturing and Electrical Supply Co., 10228 Michigan Ave., Dearborn, Mich.

Distant-reading dial and recording thermometers are available for temperatures as low as minus 200 and plus 200 F. The bulb, a brass tube ¾ in. by 11 in. is the only part that needs to be in the cold storage chamber. Made by Dickson Company, 7420 South Woodlawn Ave., Chicago, Ill.

For easy application of adhesive, Glu-Pen Corp., 11 West 42nd St., New York 36, has a pen-shaped gadget that makes it easy to apply a dot of glue to a surface. Each cartridge will make 5,000 dots.

Dr. E. W. Lyle, Texas Rose Research Foundation, Inc., recommends Dow Chemical Company's DHA-S (sodium salt of Dehydro-acetic acid) for control of molds on rose bushes held in cold storage. Recommended strength is up to 1 part per 100 with a detergent (such as Vel) included as wetting agent and spreader.

McKee New General Mgr. Cork Insulation Company

DAVID W. McKEE, well known sales expert in low temperature insulation and resilient type floorings, was recently appointed general manager of Cork Insulation Co., Inc., 730 Fifth Ave., New York, it was announced by Newton Glekel, President of the firm. Mr. McKee had formerly been associated with Armstrong Cork Co. in various capacities from 1924 through 1945, beginning as a salesman in the flooring division. He was later made branch manager of the flooring division in Armstrong's Detroit office, later becoming vice-president and general manager in one of Armstrong's subsidiaries, Cork Import Corp., which firm recently changed its name to National Cork Co.

David W. McKee

At the conclusion of World War No. 2, Mr. McKee went into business for himself as a manufacturers representative. He gave up his own business to take his new post. As general manager, he will supervise the general offices, branches throughout the United States, and the factory at Wilmington, Del. Don Gill remains as Plant Superintendent at Wilmington.

The Cork Insulation Company's factory is devoted entirely to production of corkboard, cork pipe covering and cork tile. While the firm does some contract work in branches, their efforts are devoted mostly to independent low temperature insulation contractors, and those who are interested in the development and sale of cork tile flooring materials.

New Vending Installations

THE following ice companies have installed additional S & S ice vending equipment:

Gate City Ice Co., Mesa, Arizona

Carl Bolinger Ice Co., Corcoran, Calif.

G. L. McKean Ice Co., Tranquility, Calif.

Ebner Ice & Cold Storage Co., Olney, Ill.

National Ice & Coal Co., Indianapolis, Ind.

Emporia Ice & Cold Storage Co., Emporia, Kans.

City Products Corp., St. Louis, Mo. (10 units)

Detroit City Ice & Fuel Co., Ferndale, Mich.

Crystal Springs Ice Co., Reno, Nevada

McAdoo Ice Service, Hobbs, N. M.

Seminole Ice Co., Seminole, Okla.

American Arctic Ice Co., Oklahoma City, Okla.

Cassco Corporation, Radford, Va.

Cornwall Fuel Co., Seattle, Wash.

City Products Corp., Pittsburgh, Pa.

Mackey & Rodenboh Ice Service, Newton Square, Pa.

Stewart Lauer Awarded Honorary Degree

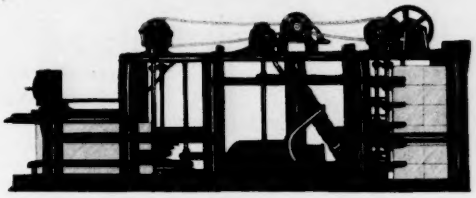
AN HONORARY doctor of laws degree was awarded to Stewart E. Lauer, president of York Corporation, and a vice-president of the National Association of Manufacturers, by Ursinus College, Collegeville, Pa.

Stewart E. Lauer

N. E. McClure, president of Ursinus College, said that Mr. Lauer was given his honorary degree for his outstanding work as an engineer, industrialist and citizen. In making the presentation, he pointed out that Lauer is a graduate of the University of Pennsylvania, and that he has been active in civic affairs as well, serving as a director of many local and national organizations.

Mr. Lauer was a leading figure in the formation and direction of the Air Conditioning and Refrigeration Machinery Association. He served two terms as its president, and is

NOW IS THE TIME TO ORDER YOUR PERFECTION SPECIAL



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The Perfection Special receives ice blocks on edge, scores them and discharges them standing on end. Capacity 4½ blocks per minute or 270 blocks per hour. This is really two machines in one—a combined heading and scoring machine—a sturdily built long-lived machine.

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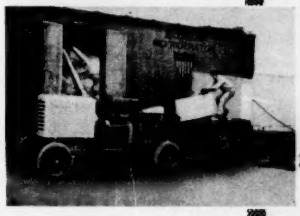
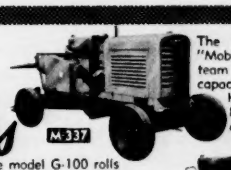
TRI-PAK *Crusher-Slingers*

A CHOICE OF FIVE MODELS TO FIT YOUR PARTICULAR OPERATION .....

There is a Tri-Pak ice crusher-slinger for every icing need. Whether you ice fishing boats, top ice carloads of vegetables, or re-ice refrigerator trucks, one of Tri-Pak's five sturdy, dependable units is size-rated for your job. All Tri-Pak crusher-slingers save labor by taking full-sized 300 pound blocks of ice. You can depend on these well engineered, sturdily built icing units.

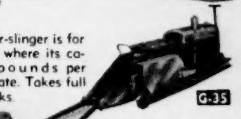


The "Mobil-Icer" is here icing a carload of carrots at the rate of 5 tons every 7 minutes. The trailer mounted "Mobil-Icer" is ideal for team track icing as it can be towed by the truck carrying the ice. The unit is powered by an 8-cylinder Ford industrial engine. Capacity is 55 tons per hour.

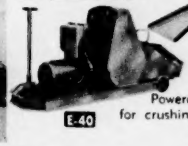


The M-337, known as "Mobil-Icer," is ideal for team track icing with a capacity of 55 tons per hour. Powered by an 8-cylinder Ford industrial engine.

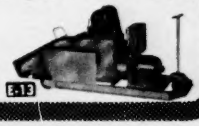
The model G-100 rolls easily on 3 rubber-tired, ball bearinged wheels. Powered by an 8 cylinder Ford industrial engine. Capacity 55 tons per hour.



The G-35 crusher-slinger is for icing operations where its capacity of 750 pounds per minute is adequate. Takes full 300 pound blocks.



The E-40 combines high capacity with the quietness and dependability of the electric motor. Capacity 55 tons per hour. Powered by a 10 HP electric motor for crushing, 30 HP motor for slinging.



The E-13 has a capacity of 600 pounds per minute. Uses one 3 HP and one 10 HP electric motor.

TRI-PAK MACHINERY SERVICE, INC.
HARLINGEN, TEXAS

Please send us your icing equipment catalog.

NAME _____

STREET _____ CITY _____ STATE _____

YOUR CATALOG

TRI-PAK MACHINERY SERVICE, Inc. ★ HARLINGEN TEXAS

presently a director and chairman of its executive committee. Among technical societies he holds a life membership in the American Welding Association, and the American Society of Refrigerating Engineers.

Ursinus College had its educational beginning in 1832 when Todd's School was opened at Perkiomen Bridge, now Collegeville. In 1848, Freeland Seminary was established on a tract adjacent to Todd's School and within a period of twenty years gave an education to many hundreds of young men.

In 1868 the work of founding a liberal college was undertaken by a body of men actuated by a desire to serve the interest of higher education and evangelical Christian religion. The site of the Freeland Seminary was chosen, and instruction was begun on September 6, 1870.

Frick Company Celebrates Century of Engineering

A HISTORY of the Frick Company has been issued in 46 pages and cover in a handsomely printed and bound volume, in celebration of its founding 100 years ago. The book tells the Frick story from the time it was established to manufacture steam engines, grain threshers, sawmills and refrigerating systems. It is profusely illustrated, starting with interesting old pictures and ending with modern views of industrial refrigeration. Besides providing interesting reading it preserves data valuable from a historical standpoint.

Union Bag & Paper Sales Appointments

THE appointment of Leroy Massey as manager of western sales and service has been announced by Union Bag and Paper Corp. A member of

Leroy Massey

the Union organization since 1924 Mr. Massey served most recently as western district manager of Flexible Packaging Sales. Malcolm Smith succeeds Mr. Massey as Western District

Malcolm Smith

Manager of Flexible Packaging Sales. Formerly a sales representative in Idaho and Texas, Mr. Smith joined the company in 1938. Both men will have their headquarters in the company's Chicago office.

Pioneer Advances Rife

PIONEER Service and Engineering Co., Chicago, Ill., announced last month the appointment of Clifford A. Rife as staff engineer with the Ventilation Section of their Structural Department. Mr. Rife is a member of Chicago Chapter NAPRE and Chicago Section ASRE. He had been with the Mechanical Engineering Dept. of the Austin Co. Pioneer Service and Engineering Co. specializes in design and construction of public utility power plants.

There's nothing like a VOSS VALVE

to make good compressors operate better

to make worn compressors operate like new!

It is a matter of record that every time an ordinary compressor valve is replaced with a specially designed VOSS valve, the immediate result is increased efficiency and greater output . . . and this record covers thousands of installations, as reports testify.

VOSS VALVES are made to specifications for air, gas and ammonia compressors; from 1" to 16" in diameter and for pressures from minus 27HG to 7,500 pounds and for speeds up to 1,000 rpm and above.

VOSS VALVES are machined from solid stock (not cast)—PLATES are machined and ground (not press formed) for precise high-tolerance fit; VALVES and PLATES are of heat-treated alloy and stainless steel; the PLATES are dimensionally stable, ductile, resist fracture, high temperatures and corrosion; withstand fatigue; won't chip, crack or score cylinder walls.

Don't be fooled by similarity in appearance. Be sure your replacement valves and plates are marked "VOSS" and obtain the VOSS values developed by 32 years of specialized compressor valve engineering and experience.

VOSS VALVES and PLATES ASSURE

- Quiet, vibration-free operation
- 20 to 60% more valve area
- Less power consumption
- Low Pressure loss
- Normal discharge temperature
- Lower operating costs

To increase the efficiency of your compressor, send us the name, bore, stroke and speed of your machine. Our detailed proposal will be sent without obligation.

J. H. H. VOSS VALVES REG. U.S. PAT. OFF.

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EASY WHEN YOU KNOW HOW

Like any other skilled work, pipe bending and coil fabrication is all a matter of proper equipment and know-how. For years CHICAGO NIPPLE has been the logical source for such production—even for firms with pipe bending facilities in their own plants.

Send sketch or B/P specification for quotation and delivery schedule.

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FAST, ECONOMICAL CRUSHER SAVES TIME, LABOR COST!

The new and fast-operating "Little Chief" Ice Crusher by Bateman has three grate adjustments and will grind a 25-pound block of ice into fine ice in 12 seconds; into medium ice in 8 seconds, and into coarse ice in only six seconds.

It holds snow to an absolute minimum, is galvanized and has a chute for filling bags. It is simple—and dependable. There are no gears since drive is direct from two-groove flywheel.

Because of high grinding speed, the "Little Chief" operates from a ¾ H.P. motor. If desired, motor will be provided at prevailing price.

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$149.00

Less Motor
FOB Mineral Wells

Bateman Write For Details
Mineral Wells, Texas
Ice Processing Equipment

PRINCIPLES of REFRIGERATION

The Book for:

- ERECTING ENGINEERS
- OPERATING ENGINEERS
- CONSULTING ENGINEERS
- SALES ENGINEERS
- CONTRACTORS
- ARCHITECTS
- STUDENTS
- PLANT OWNERS

PRINCIPLES OF REFRIGERATION, 3rd Edition (1947) revised by Wm. H. Motz, provides information and data for the practicing refrigeration engineer. Of special interest to erecting and operating refrigerating engineers, refrigeration machinery sales engineers, persons employed in building refrigerating machinery and those employed in ice making, cold storage plants or other establishments equipped with refrigerating machinery. Contains information that the refrigerating engineer should know in order that he may have complete and up-to-date knowledge.

Written in every day language and as free as possible from higher mathematics. The theoretical and fundamental operating principles are given attention first—followed by numerous practical considerations and the application of principles to the economic production of ice and refrigeration for various purposes.

672 Pages—215 Illustrations—9 Folded in charts—6 Working charts in Cover Pocket. Substantially bound.

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when you repair your floors with **PERMAMIX**

Easy to apply—sets instantly—long wearing for year around use indoors or out—WILL NOT FREEZE—can be stored indefinitely and used in any temperature—lowers maintenance costs amazingly.

Here's all you do: Clean hole in any type floor, spread primer supplied in drum, fill in with PERMAMIX, tamp and dust with cement or floor dust, resume traffic immediately. It's that easy, for PERMAMIX feather edges and no cutting or chipping is required. No skilled labor is necessary, you need no special equipment, you have no mixing, waiting or production delays when you repair or patch your floors the easy, fast PERMAMIX way. Comes in handy, durable 50 lb. net weight drums.

Write or call for full details

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Creamery Package Promotes Anderson

THE promotion of D. L. Anderson to manager of the Minneapolis branch of The Creamery Package Mfg. Company has been announced by James L. Brazee, director of sales. He will relieve E. J. Fahey who will continue, however, to serve in an advisory capacity.

D. L. Anderson

Mr. Anderson first joined Creamery Package in 1937 as a salesman for the Omaha Branch. In 1941 he was transferred to the Minneapolis branch as assistant sales manager and served there until his recent promotion.

Prior to working for Creamery Package, he was plant superintendent for Sunrise Creameries at Cheyenne, Wyoming, for a period of five years, and before that was associated with the Fairmont Foods Company at their plants in Alliance and Lincoln, Nebraska. At the University of Nebraska, Mr. Anderson majored in dairy manufacturing and processing and earned his bachelor's degree in Agriculture in 1930.

Beatrice Names New Sales Representative

ALEX MacTAGGART, manager of the Lackawanna Cold Storage Division of Beatrice Foods Co. in Scranton, Pa., has been appointed national sales representative for all Beatrice Foods Cold Storage Warehouses, William G. Karnes, president of Beatrice Foods, announced recently.

Alex MacTaggart

The company operates large refrigerated warehouses in Scranton, Pa.; Chicago, Ill.; Detroit, Mich.; Topeka, Kans.; Lincoln, Nebr.; and Denver, Colo.; thus providing national food distributors with specialized warehouse services on a wide territorial basis. Mr. MacTaggart will continue as manager of the Lackawanna Cold Storage Division with which he has been associated for more than 25 years, and will maintain headquarters in Scranton.

THE BUYERS DIRECTORY

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ABSORBERS
Frick Co., Waynesboro, Pa.
Vogt Machine Co., Henry, Louisville, Ky.

AIR COMPRESSORS
Frick Co., Waynesboro, Pa.

AIR CONDITIONING EQUIPMENT
Frick Co., Waynesboro, Pa.
Niagara Blower Co., New York, N. Y.
Vilter Mfg. Co., Milwaukee, Wis.

AMMONIA COMPRESSOR VALVES
Frick Co., Waynesboro, Pa.
Vilter Mfg. Co., Milwaukee, Wis.

AMMONIA COMPRESSORS
Creamery Package Mfg. Co., Chicago, Ill.
Dersch, Gesswein & Neuert, Inc. Chicago, Ill.
Enterprise Equipment Corp., Yonkers, N. Y.
Frick Co., Waynesboro, Pa.
Kehoe Machinery Co., Inc., R. P., West Englewood, N. J.
Reynolds Mfg. Co., Springfield, Mo.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

AMMONIA CONTROL DEVICES
Dersch, Gesswein & Neuert, Inc., Chicago, Ill.
Kramer Trenton Co., Trenton, N. J.

AMMONIA FLOAT VALVES
Armstrong Machine Works, Three Rivers, Mich.
Frick Co., Waynesboro, Pa.
Phillips & Co., H. A., Chicago, Ill.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

AMMONIA MANUFACTURERS
Armour Ammonia Div., Armour & Co., Chicago, Ill.
Bower Chemical Mfg. Co., Henry Philadelphia, Pa.
du Pont, Polychemicals Dept., Wilmington, Delaware

AMMONIA PURIFIERS
Dersch, Gesswein & Neuert, Inc., Chicago, Ill.
Frick Co., Waynesboro, Pa.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

AMMONIA RECEIVERS
Creamery Package Mfg. Co., Chicago, Ill.
Dersch, Gesswein & Neuert, Inc., Chicago, Ill.
Enterprise Equipment Corp., Yonkers, N. Y.
Frick Co., Waynesboro, Pa.
Kehoe Machinery Co., Inc., R. F., West Englewood, N. J.
National Pipe Bending Co., New Haven, Conn.
Rempe Company, Chicago, Ill.
Reynolds Mfg. Co., Springfield, Mo.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

AMMONIA VALVES & FITTINGS
Dersch, Gesswein & Neuert, Inc. Chicago, Ill.
Shank Co., Cyrus, Chicago, Ill.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

ARCHITECTS AND ENGINEERS
Greene, Van R. H., New York, N. Y.
Ophuls & Associates, Fred, New York, N. Y.

ASPHALT PRODUCTS
American Bitumuls & Asphalt Co. San Francisco, Calif.

AUTOMATIC CONTROL DEVICES
Alco Valve Co., St. Louis, Mo.
Armstrong Machine Works, Three Rivers, Mich.
Frick Co., Waynesboro, Pa.
Phillips & Co., H. A., Chicago, Ill.
Rex Engineering & Sales Co., Oklahoma City, Okla.
Sporlan Valve Co., St. Louis, Mo.
Vilter Mfg. Co., Milwaukee, Wis.

BAGS, ICE
Index Coupon & Supply Co., La Porte, Ind.
Union Bag & Paper Corp., New York, N. Y.

BAGS, WATERPROOF PAPER
Index Coupon & Supply Co., La Porte, Ind.
Union Bag & Paper Co., New York, N. Y.

BEER COOLERS
Frick Co., Waynesboro, Pa.
Martocello & Co., Jos. A., Philadelphia, Penna.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

BLOWERS
Frick Co., Waynesboro, Pa.
Roots-Connersville Blower Corp., Connersville, Ind.

BOILERS
Frick Co., Waynesboro, Pa.
Vogt Machine Co., Henry, Louisville, Ky.

BOILER TUBES
Byers Co., A. M., Pittsburgh, Pa.

BOOKS—TECHNICAL
Nickerson & Collins Co., Chicago, Ill.

BRINE CIRCULATORS
Creamery Package Mfg. Co., Chicago, Ill.
Frick Co., Waynesboro, Pa.
Reynolds Mfg. Co., Springfield, Mo.
Roots-Connersville Blower Corp., Connersville, Ky.
Vilter Mfg. Co., Milwaukee, Wis.

BRINE COOLERS
Dersch, Gesswein & Neuert, Inc., Chicago, Ill.
Enterprise Equipment Corp., Yonkers, N. Y.
Frick Co., Waynesboro, Pa.
Kehoe Machinery Co., Inc., R. P., West Englewood, N. J.
Reynolds Mfg. Co., Springfield, Mo
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

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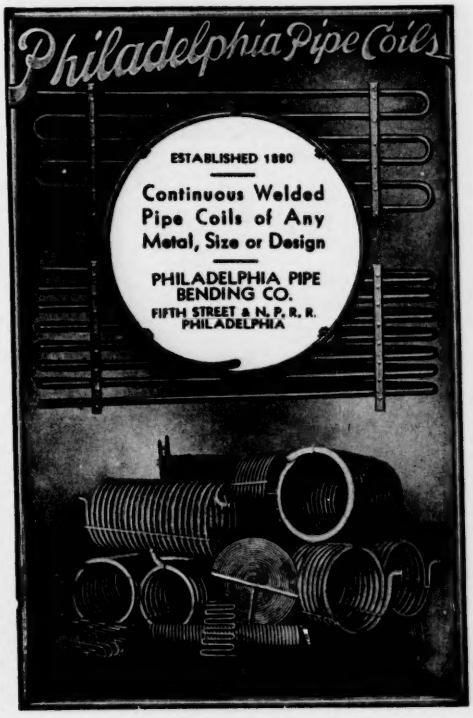
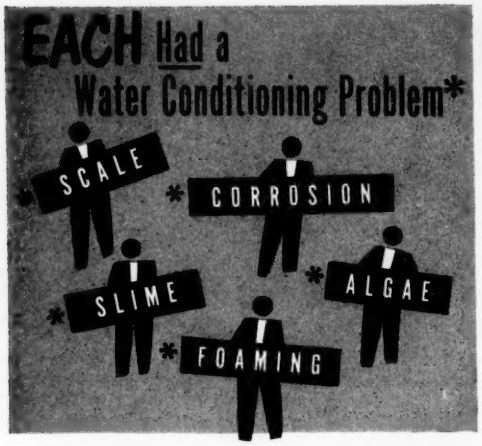
Purity of product and immediate shipment are two good reasons for specifying Bower Brand. Please keep empty cylinder rotating.

HENRY BOWER CHEMICAL MANUFACTURING COMPANY
29TH AND GRAY'S FERRY ROAD
PHILADELPHIA 46, PA.

Philadelphia Pipe Coils


ESTABLISHED 1880
Continuous Welded Pipe Coils of Any Metal, Size or Design
PHILADELPHIA PIPE BENDING CO.
FIFTH STREET & N. P. R. R.
PHILADELPHIA



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Wright never offers a "cure-all" . . . your water conditioning problems are individually studied and analyzed by our technical staff. The answer to each problem is contained in a complete personalized report prepared especially for you. After you adopt our recommendations, constant field and laboratory checks insure proper economical performance. Write or call collect today for a complete survey of your individual water conditioning problems.

Wright Chemical Corporation

WRIGHT CHEMICAL CORPORATION
Specializing in Water Conditioning
GENERAL OFFICES AND LABORATORY
633 WEST LAKE STREET, CHICAGO 6, ILLINOIS
Offices in Principal Cities
Distributors of Nelson Chemical Proportioning Pumps and ReNnite Softeners and Other External Treating Equipment.

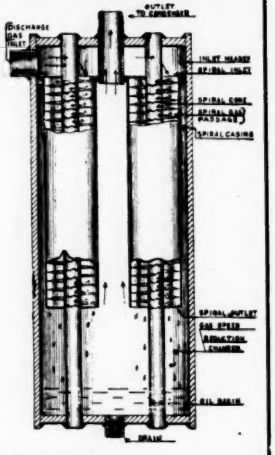
"King Zeero"

OIL SEPARATOR

STOPS OIL FROM ENTERING CONDENSER RECEIVER AND LOW SIDE

Allows operation as was originally intended. Simple in operation — no parts to wear out — no screens, metal wool or any close screens to clog, raise discharge pressures and cut down capacity.

When used in connection with air compressors, water is also separated with the oil.



Built for years of trouble free service. Mechanical details on request.

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1447-55 Montrose Ave., Chicago 13, Ill.

THE BUYERS

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CAN DUMPS
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Kehoe Machinery Co., Inc., R. P., West Englewood, N. J.
Ohio Galvanizing & Mfg. Co., Niles, Ohio
Reynolds Mfg. Co., Springfield, Mo.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

CAR ICING EQUIPMENT
Capital Elevator & Mfg. Co., Columbus, Ohio
Gifford-Wood Co., Hudson, N. Y.
Tri-Pak Machinery Service Inc., Harlingen, Tex.

COILS
Byers Co., A. M., Pittsburgh, Pa.
Chicago Nipple Mfg. Co., Chicago, Ill.
Creamery Package Mfg. Co., Chicago, Ill.
Detroit Ice Machine Co., Detroit, Mich.
National Pipe Bending Co., New Haven, Conn.
Rempe Company, Chicago, Ill.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

COLD STORAGE CONSTRUCTION
Armstrong Cork Co., Lancaster, Pa.
Frick Co., Waynesboro, Pa.

COLD STORAGE DOORS
Butcher Boy Refrigerator Door Co., Chicago, Ill.
Jamison Cold Stge. Door Co., Hagerstown, Md.
Refrigeration Engineering Co., Montgomery, Minn.

COMPRESSORS
(See Ice Making and Refrigerating Machinery)

COMPRESSOR VALVE PLATES AND DISCS
Voss, Inc., J. H. H., New York, N.Y.

COMPRESSOR VALVES
Voss, Inc., J. H. H., New York, N.Y.

CONDENSERS
Creamery Package Mfg. Co., Chicago, Ill.
Enterprise Equipment Corp., Yonkers, N. Y.
Dersch, Gesswein & Neuert, Inc., Chicago, Ill.
Frick Co., Waynesboro, Pa.
Kehoe Machinery Co., Inc., R. P., West Englewood, N. J.
King-Zeero Co., Chicago, Ill.
National Pipe Bending Co., New Haven, Conn.
Rempe Company, Chicago, Ill.
Reynolds Mfg. Co., Springfield, Mo.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

CONSULTING ENGINEERS
Greene, Van R. H., New York, N. Y.
Ophuls & Associates, Fred, New York, N. Y.

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Kramer Trenton Co., Trenton, N. J.
Taylor Instrument Cos., Rochester, N. Y.

CONVEYORS
Capital Elevator & Mfg. Co., Columbus, Ohio
Gifford-Wood Co., Hudson, N. Y.

COOLING TOWERS
Frick Co., Waynesboro, Pa.
Vilter Mfg. Co., Milwaukee, Wis.

CORK INSULATION
Armstrong Cork Co., Lancaster, Pa.

CORROSION CONTROL
Wright Chemical Corp., Chicago, Ill.

COUPON BOOKS
Index Coupon & Supply Co., La Porte, Ind.
Vivian Mfg. Co., St. Louis, Mo.

COVERINGS (PIPE AND BOILERS)
American Hair & Felt Co., Chicago, Ill.
Armstrong Cork Co., Lancaster, Pa.

CYLINDERS (GAS & LIQUID)
Byers Co., A. M., Pittsburgh, Pa.

DIP TANKS AND CAN BASKETS
Frick Co., Waynesboro, Pa.
Knickerbocker Stamping Co., Parkersburg, W. Va.
Ohio Galvanizing & Mfg. Co., Niles, Ohio
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

DRIVES, TRANSMISSIONS
Frick Company, Waynesboro, Pa.

ELEVATING & CONVEYING MACHINERY
Capital Elevator & Mfg. Co., Columbus, Ohio
Gifford-Wood Co., Hudson, N. Y.
Lewis-Shepard Products, Inc., Watertown, Mass.

ENGINEERS AND ARCHITECTS
(See Architects and Engineers)

EVAPORATIVE CONDENSERS
Niagara Blower Co., New York, N. Y.

EVAPORATORS
Creamery Package Mfg. Co., Chicago, Ill.
Frick Co., Waynesboro, Pa.
Niagara Blower Co., New York, N. Y.
Rempe Company, Chicago, Ill.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

FEED-WATER HEATERS
National Pipe Bending Co., New Haven, Conn.
Vogt Machine Co., Henry, Louisville, Ky.

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FIELD ICE SAWS
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FILTERS, WATER
Frick Co., Waynesboro, Pa.

FIN COILS
Rempe Company, Chicago, Ill.
Vilter Mfg. Co., Milwaukee, Wis.

FITTINGS
Dersch, Gesswein & Neuert, Inc., Chicago, Ill.
Frick Co., Waynesboro, Pa.
Henry Valve Co., Chicago, Ill.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

FLOOR PATCHING
Permamix Corp., Chicago, Ill.

FROZEN FOOD LOCKERS
Knickerbocker Stamping Co., Parkersburg, W. Va.

FUEL OIL PRE-HEATERS
National Pipe Bending Co., New Haven, Conn.
Rempe Company, Chicago, Ill.

HAND TRUCKS
Ohio Galvanizing & Mfg. Co., Niles, Ohio

HOISTING APPARATUS
Capital Elevator & Mfg. Co., Columbus, Ohio
Reynolds Mfg. Co., Springfield, Mo.

HUMIDITY AIR CONDITIONERS
Niagara Blower Co., New York, N. Y.

HYGROMETERS
Taylor Instrument Cos., Rochester, N. Y.

ICE BAGS
Union Bag & Paper Corp., New York, N. Y.

ICE BLOWERS
Gifford-Wood Co., Hudson, N. Y.

ICE CANS
Kehoe Machinery Co., Inc., R. P., West Englewood, N. J.
Knickerbocker Stamping Co., Parkersburg, W. Va.
Ohio Galvanizing & Mfg. Co., Niles, Ohio

ICE CAN FILLERS
Frick Co., Waynesboro, Pa.
Knickerbocker Stamping Co., Parkersburg, W. Va.
Ohio Galvanizing & Mfg. Co., Niles, Ohio
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.

ICE CHIPPERS
Capital Elevator & Mfg. Co., Columbus, Ohio
Gifford-Wood Co., Hudson, N. Y.
Index Coupon & Supply Co., La Porte, Ind.
Vivian Mfg. Co., St. Louis, Mo.

ICE CHUTES
Frick Co., Waynesboro, Pa.
Gifford-Wood Co., Hudson, N. Y.
Jamison Cold Storage Door Co., Hagerstown, Md.

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Many People Do!

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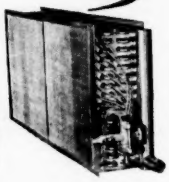

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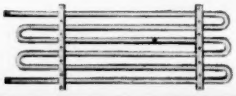

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ALWAYS DEPENDABLE!

SEMI-STEEL SHUT-OFF VALVE

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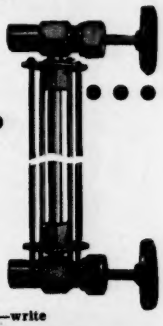

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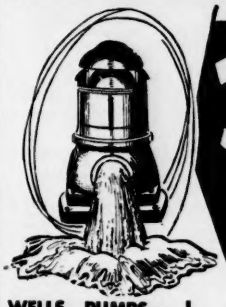

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WATER TREATMENT

DIMCO CAST ALUMINUM FIN EVAPORATING COIL

★ *Saves Space*

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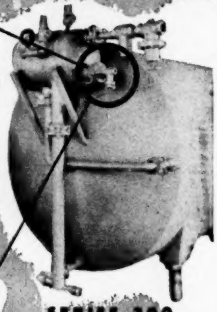
DIMCO Evaporators in a Frozen Food Storage Room at Great Lakes Terminal Warehouse, Toledo, Ohio. A typical installation facilitating palletizing.

PHILLIPS FLOAT CONTROLS

control the FINEST in REFRIGERATION

Use of Phillips Controls as original equipment on your refrigeration machinery shows that its manufacturer intends you to have the best in dependable, efficient operation. Also, Phillips Controls can help performance of older equipment. Phillips Float Controls range in capacity from 1 to 1000 tons for "Freon" and 1 to 2000 tons for ammonia. Full information and engineering advice are gladly given.



Dependable refrigerant control is assured in this Cherry-Burrell Type C Cold Wall Storage Tank with a Phillips No. 300 Float Valve.

For new equipment or replacement, look for the name PHILLIPS and be sure.

SERIES 300 PHILLIPS FLOAT CONTROLS

SERVICEABLE—No pump down needed to inspect or renew cartridge.

ADAPTABLE to most types of flooded evaporators.

COMPACT—Mounts directly on surge drum.

IDEAL for storage tanks, air and water coolers, ice builders and other "packaged" units.

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Fast - Sturdy - Dependable -

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- COMPRESSORS—3x3 to 12x12
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- COMPRESSORS—Diesel or Steam driven
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Write or call for complete list of new and reconditioned ice making equipment.

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WANTED—Chief engineer-ammonia — for large modern cold storage warehouse located in Northern Ohio; state age, experience and salary desired. A-1 references necessary, Write Box DC-2, c/o Ice and Refrigeration.

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FOR SALE—15 ton ice plant in middle Tennessee. Owner going out of business due to old age. Will sell as a whole or the equipment by the piece. Contact H. D. Jenkins, Dickson, Tenn. Phone 2404.

FOR SALE—Latest York equipped tunnel type freezer in full operation. Absolutely essential to New England's third largest fishing port. Adjoining wharf with large building for fish packing. Write P.O. Box 620, New Bedford, Mass., or telephone New Bedford 5-7493.

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FOR SALE
USED ICE PLANTS AND REFRIGERATING EQUIPMENT
Complete ice plants—10-50 ton.
Ammonia compressors—all sizes.
Condensers, brine coolers, ice cans.
Valves and fittings.

B & E REFRIGERATING CO.
2 ORANGE ST., NEWARK 2, N. J.
Phone: MItchell 3-7790 Cable address "BERECO"

FOR SALE—Howe 11½x11½ compressor with 135 h.p. synchronous motor, $1,250.00. 400 lb. ice cans, $3.00 each. Miller scoring machine $150.00. Three shell & tube condensers, York 16'-36-1¼ tubes, 7 passes, $400.00 each. Ammonia receivers, valves, and fittings. Write us what you need; we buy, sell and trade. Gordon Equipment Co., 6530 West Jefferson Ave., Detroit 17, Mich. Liquidators and Appraisors.

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YORK—LATE ICE PLANT EQUIPMENT
1—60 h.p. Century motor—2200 volt.
1—40 h.p. Century motor—2200 volt.
2—Westinghouse magnetic starters.
2—Vertical direct connected agitators, 3 h.p.
1—Hoffman blower.
2—60 KVA condensers or capacitors.
1—2 can Euclid hoist, 1 ton.
1—2 can Euclid hoist, ½ ton.
1—12"x36½' channel with trolleys "Curtis".
1—Cook 8 inch 5-stage turbine deep well pump 5 h.p.
1—Cook 7⅝" 10-stage turbine deep well pump 7½ h.p.
1—Meir crane mover.
1—Model JBAZ International water softener complete steel tank—top operated with mixer—one 24" and one 30" pressure filter.
450—400 lb. ice cans, like new, (Ohio), 11½x22½ x57, in brine.
220—white oak dual covers for ice tank—400 lb.
1—Can filling tank, 2 accumulators, brass drop tube and brackets, 2 can dump.
1—Miller ice scoring machine for 400 lb. blocks.
1—Perfection ice scoring machine for 400 lb. blocks.
1—Gifford Wood tiering machine—8 tier.

WHITE FROST ICE CO., INC.
5th & Main Sts. Anderson, Ind.
Phone 7702

USED EQUIPMENT—continued

FOR SALE—One Gifford Wood Type F scoring machine for 11" x 22" x 44" blocks. Has been used only one ice season. Bargain. Decatur Ice Co., Box 424, Decatur, Texas.

FOR SALE—Self-contained units, 6x6, 9x9 with motors, 7½x7½ and 9x9 with synchronous motors, ice plants, cans, coils, condensers, agitators, blowers, York trunk type coil, Ford delivery truck. We desire good equipment for export. Parke Pettegrew & Son Co., 370 West Broad St., Columbus 8, Ohio.

FOR SALE

2 each Compressor, Ammonia, Frick, double action, 10½" x 18" J. T., 140 tons cap., 22 lbs. PSI suction, 185 lbs. PSI discharge, directly connected to electric motor w/GE Synchronous type QS-40-180M-180 form EJ, 39.1 amp., power factor 1.0, amp. field 38.3 w/electric control panel, GE, type AQ3Y, 2300 volt, 225 KVA w/motor Generator set including: 1 GE induction motor, AC, type KQ944-4-7½—1800, form C, 2 phase, 60 cycle, 220 volt, 7½ HP; 1 GE DC Generator, type CD65, Form A, compound wound, 46 amp., 125/125 volt 1800 RPM, 5—¾ KW, w/starting compensator, manual reset, GE, CR 1034-K1, Cat. #201901303-J2F6 motor HP 5—15, 220 volt, 60 cycle, 2 phase, w/condenser, vertical type, gravity feed, Frick, 38", dia. x 14' long. 140-2" tubes w/6" gaseous inlet, 3" liquid outlet w/49" x 49"—1" steel plate base, Ser. Nos. 29683 RT-29683½ LT, 29682 RT-29682½ LT.

2 each Water Cooler, Vilter, shell & tube 12 pass, 24" dia. x 12' long, 156—1¼" tubes—612 sq. ft. of surface, equipped W/12" x 10'8" suction accumulator, header, & one A60242F #1211 style E ammonia L. P. Float valve, w/1-4" ammonia stop valve & 1 1—1¼" drain valve w/pipe S type stand for vertical mounting.

5 each Packice Machine, Vilter, 6—section, spray type, complete w/horizontal accumulators w/style #E float valve, less float body. Complete w/connections and piping w/motor reducer—5 HP Louis-Allis motor, type OGS, frame 754, Class N, Form B, 1750 RPM, 220/440 volt, 3 phase, 60 cycle, 13/6.5 amp., w/flex, spring coupling for connecting motor reducer to freezer shaft; w/Briquette press for making #1-16 briquetts complete w/chain drive, 1¼" pitch DBL width roller chain w/sprockets for briquettes and motor shaft, w/press motor-reducers, 13.5 RPM, output speed; w/3 HP, Ideal Electric Motor, induction, Class A, Frame 255, 1700 RPM, 224/440 volts, 3 phase, 60 cycle, 7.6 amp; w/pump, Weinan 2" typ: U & B, motor driven, 90 gal. per M., 30' head, 1750 RPM, 1 phase, w/Louis-Allis Electric Motor, splash proof, type FX, frame 224, Class R, Form A, 2 HP, 220/440 volt, 1750 RPM, 3 phase, 60 cycle, 5.6/2.8 amp., Code H, Ser. #49352.
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Phone—County 5300

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2—7¼x7¼ high-speed Bakers.
2—8x8 high-speed Carbondale Compressors.
1—9x9 high-speed Worthington Compressor.
3—sets of 10x10 duplex York or Frick, with 225 h.p. syn. motor 300 r.p.m.

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278 W. Englewood Ave. West Englewood, N. J
Phone: TEaneck 7-3916

WANTED—for 20 ton ice tank, Frick or York compressor, electric motor 220 volt 3 ph., 60 cycle, condenser, receiver and oil separator. Must be in good condition and a bargain. Crystal Ice Works Inc., Bartow, Florida.

WANTED—New or used refrig. equipment for small rooms and delivery trucks. Preferably Freon. Ammonia system for 1200 cu. ft. freezer. Valves and controls. Also appreciate quotations on insulation, hardware, etc. Give description, condition, size, price F.O.B., and location. Address Box DC-5, c/o Ice and Refrigeration.

FOR SALE
COMPLETE ICE MAKING PLANTS
50 ton Frick, 27 can pull, evaporative condensers.
60 ton DeLaVergne, 14 can pull.
35 ton York, Diesel drive, 6 can pull.

AMMONIA COMPRESSORS
1—12½ x 14½ York, capacity control valves.
2—10x10 Yorks, 300 r.p.m.
1—9x9 and 1—8x8 York, high speed, capacity control valves.
1—3x3 and 1—4x4 self-contained units.
20,000 ft. 1¼" pipe, scoring machines, ice cans, blowers, agitators, etc.

JOHN F. CARSON
2829 N. Broad St. Philadelphia 32, Pa.
Phone BAldwin 9-8549

FOR SALE—Two 8 x 8 Yorks with 30 h.p. motors. 3x3, 4x4 and 5x5 slef-contained Yorks. 4x4, 5x5, 6x6, 9x9 Yorks, splash lubrication. One 3 ton Niagara blower unit. Receivers all sizes. ½", ¾", 1" and 1¼" valves, 30% off. Write E. Niebling, 1546 St. Clair Ave., Mount Healthy, Cincinnati 31, Ohio.

FOR SALE—50 nearly new 300-lb. ice cans; 1—5 h.p. brine agitator; 1—25-lb. Thermo cuber; 1—Little Giant ice crusher. A reasonable offer will sell these items. Crystal Ice & Cold Storage, Front and George Sts., De Pere, Wisc.

FOR SALE—One 75 h.p. Westinghouse type HR 300 r.p.m., 220 V., 60 cy., 3 ph. A.C. unity power factor, synchronous motor, complete with exciter, generator set and panel switchboard. Has been in operation on a 9 x 9 50 T. 300 r.p.m. ammonia comp. 5½" crankshaft. The above is in excellent condition. Fairmont Foods Co., 608 E. Milwaukee Ave., Detroit 2, Mich.

FOR SALE — USED ICE PLANTS AND REFRIGERATING EQUIPMENT
2—90 ton York Evaporative Condensers
20 ton Ice Plant, 252 300-lb. Cans, Diesel drive compressor
30 ton Ice Plant, 368 300-lb. Cans, 8 can pull, Electric driven
40 ton Ice Plant, 552 300-lb. Cans, 6 can pull, Diesel driven
130 ton Ice Plant, 1,378 300-lb. Cans, 26 can pull, Electric driven
175 ton Ice Plant, 2 tanks, 969 cans each tank, 1,938 total, 19 can pull, Electric driven
10,000 11" x 22" x 47" 300-lb. Ice Cans, Excellent Condition
2,500 11" x 22" x 51" 300-lb. Ice Cans, Excellent Condition
Ammonia Compressors 3" x 3" to 12½" x 14½"
Shell & Tube Ammonia Condensers, Brine Coolers, Receivers, Traps, Valves & Fittings
Write, wire or cable us on any equipment you may need.

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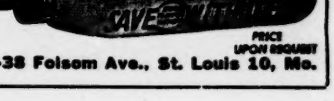
77-79 Alexander Street Yonkers, New York
Yonkers 8-8118-9 Cable Address: ENEQCO

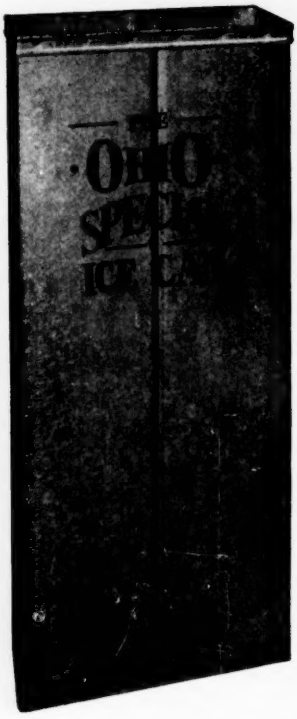
VIVIAN SERV-ICE TRADE MARK REG. U.S. PAT. OFF. Products
ICE TOOLS AND SUPPLIES

WE CONTINUE YEAR AFTER YEAR
to make the kind of Ice Picks that will give YOUR customers satisfaction and build up GOOD WILL FOR YOU.



PRICE UPON REQUEST

VIVIAN MANUFACTURING CO. 4132-38 Folsom Ave., St. Louis 10, Mo.



Welded Cans
Integral Tube Cans
Arctic Pownall Cans
Can Baskets
Condenser Trough

• • • • • • • • • • •

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We welcome you at Booth 23, NAII Convention, Cincinnati, Ohio, Nov. 11-14

THE OHIO GALVANIZING & MFG. CO.
NILES — *Established 1902* — OHIO

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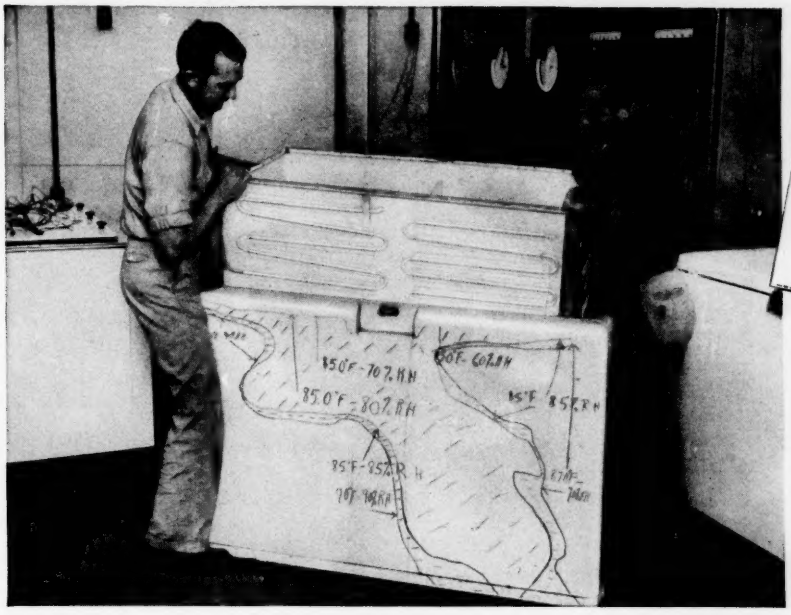
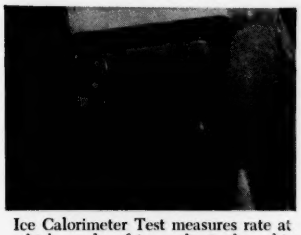
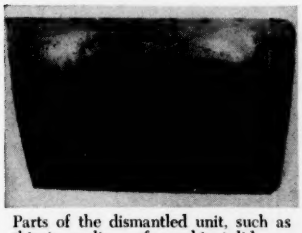


Areas of condensation have been marked on the home freezer at left. The results of this "Sweat Pattern Test" are part of the performance data included in Armstrong's confidential laboratory report.

Here's where freezer performance is PREVIEWED to prevent possible defects in construction



Ice Calorimeter Test measures rate at which a cake of ice melts in the cabinet. This indicates over-all BTU loss.



Parts of the dismantled unit, such as this inner liner of a cabinet lid, are studied for signs of poor construction.

Finding possible trouble before it starts is the job of Armstrong's Life Test Service. Here your equipment is put through a series of tests which in a few weeks gives you an accurate preview of how it will perform after years of actual service. When tests are completed, you get a detailed report on the performance of your unit.

In the cabinet being dismantled above, examination of the cabinet showed that it had a 5.33% increase in heat loss. Anything over 5% is normally considered unsatisfactory. A large concentration of water and ice was found in the lid insulation. Openings around the hinge shafts and latch mechanism that were not sealed were primarily responsible for this loss of efficiency.

Large areas of condensation were also found on the cabinet walls. During dismantling, technicians noticed several void spaces in the insulation. One of their suggestions was that the insulation be placed into position first, and the inner tank set into position last.

All of these defects were corrected before any cabinets were mass-produced, saving the manufacturer considerable expense.

There's no charge for these tests. They're conducted free, providing one of the models you submit is insulated with one of Armstrong's equipment insulations:—LK® Corkboard, Fiberglas*, or Temlok®. For further information, write to Armstrong Cork Company, 4512 Queen Street, Lancaster, Penna.

*® OCFCorp.

ARMSTRONG'S EQUIPMENT INSULATION

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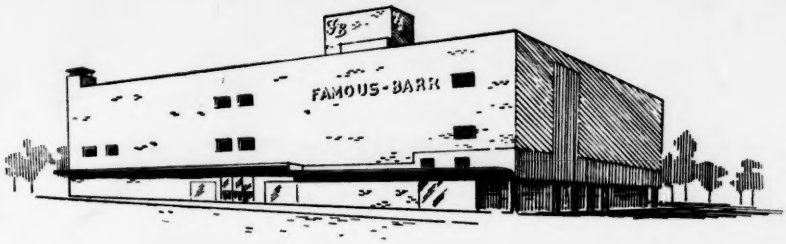
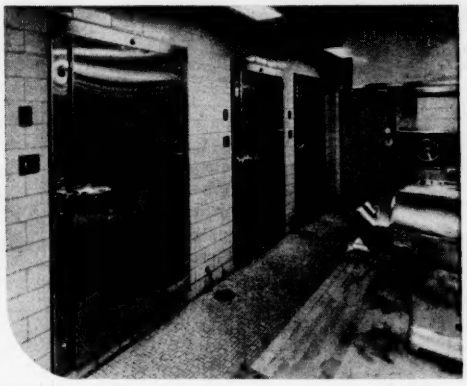
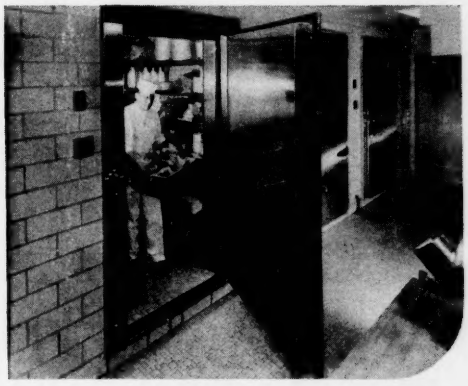
JAMISON Stainless Doors Selected For Store Setting Pattern For Future Building



Famous-Barr's new Southtown store in suburban St. Louis may prove to be a pattern for future store builders. Of an advanced design, the store contains every convenience for shoppers and employees, including a large dining deck, coffee shop, restaurant, employees cafeteria and a kitchen, which is the last word in modern efficiency and sanitation. Jamison stainless steel clad cold storage doors in this kitchen combine "hospital spotlessness" with a maximum of cold-sealing efficiency. Jamison Cold Storage Door Company, Hagerstown, Md., U. S. A.



EFFICIENT DOOR HARDWARE . . . Adjustoflex Hinges combine spring tension regulation and automatic self-adjustment. Wedgetight Fastener and Adjustoflex Hinges assure tight seal of gasket against frame.



DOORS OPEN EASILY . . . The Wedgetight Fastener provides the utmost ease in opening door from either side. Tight door seal can be released with minimum effort.

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